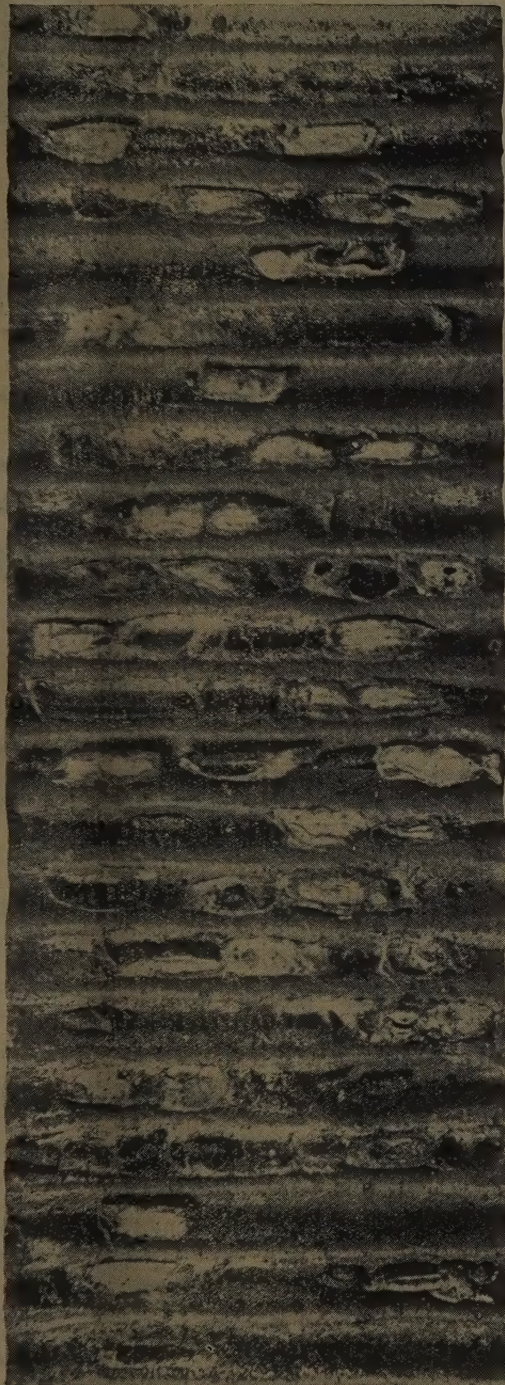


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The above photograph (shows the actual size) Inner side of an 8-inch section of "Vallo" Patent Codlin Moth Tree Bands in which 60 or more dead grubs or caterpillars can be seen. The grubs are not represented by a number of the corrugations. Kill as this photograph shows only one set of corrugations. The Band is fastened to the trunk of the tree (as shown above) but a similar number are trapped and killed in the second series of small passages which are formed by the smooth outside section of the Band against the corrugated section.

**Your Orchard is not adequately protected until fitted with "VALLO" Patent Codlin Moth Tree Bands.**

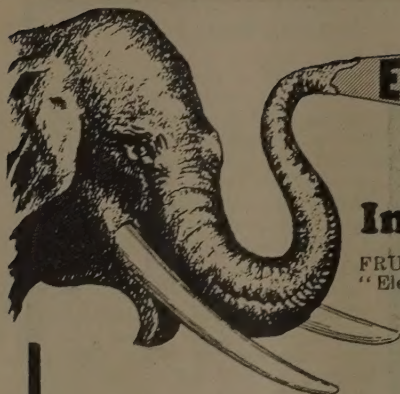
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## APPLE AND PEAR EXPORT.

THE 1933 APPLE AND PEAR export season has proved to be a disastrous one for growers and shippers. After a favorable commencement, prices fell away seriously, especially when heavy shipments arrived; but for the favorable exchange, the position would have been infinitely worse. The industry is now entering upon a new phase of its existence. Under conditions which have applied in the 1932 and 1933 export seasons, the export trade is impossible. During August, conferences between representatives of the fruit industry and the shipping companies have been held, but the position is still obscure. The industry seeks reduced freights and improved services. Shipping companies indicate that they are not keen on fruit as a cargo. The concessions offered, namely, 2d. per case reduction on fruit shipped in June, and 3d. in July is farcical. The only other reduction offered is a proportion of any rebates that the shipping companies may secure by reduction in taxation and port charges.

The Prime Minister has been consulted, and he views the situation from the standpoint of the fruit industry with the utmost sympathy. In the meantime, Tasmania has made a straightout request for a Government subsidy to bring the price of all fruit exported to the level of 4/6 per case F.O.B. The Commonwealth Government sent the Assistant Secretary to the Commerce Department, Mr. Murphy, to Tasmania to investigate this matter.

Speaking at a large meeting of growers at Tyabb, Victoria, Mr. G. W. Brown, President of the Victorian Fruit Marketing Association, and a member of the Australian Apple and Pear Export Council, who attended the Conferences of the shipping companies, and the Prime Minister, stated there was urgent necessity for a reduction in shipping freights and for improved services. Australia must recognise that the limit of the fresh fruit export to U.K. was between four and five million bushels per annum. The British market could be fed at the rate of 250,000 to 300,000 cases a week for fourteen weeks, giving a maximum of about four million cases; about 50 per cent. of it could go to London. The average fruit consumption in Britain was about 1,500,000 cases a week, of which 1,100,000 came from local and other sources, leaving from 300,000 to 400,000 per week from Australia and New Zealand. There have recently been large plantings of Apples in England, cool storage and storage installations had been greatly developed and Britain was prepared to protect her own primary producers.

Continuing, Mr. Brown said the industry was now thoroughly roused. By the formation of a Freight Committee of the Australian Apple and Pear Export Council, the quantity of fruit from each State, and the varieties would be determined. The insertion of a clause in the Shipping Agreement would ensure this programme being adhered to. Other things were involved—reduction of varieties and the adoption of a uniform case for each State.

Coupled with the foregoing is the necessity for a review of the industry in its entirety, i.e., export, local and interstate marketing, including a publicity campaign to increase fruit consumption, the utilisation of inferior fruit for pulping, the manufacture of cider and Apple drinks, also the recovery of the by-product pectin.

It remains for leaders in the Australian fresh fruit industry to work out the details relative to the foregoing in the full confidence that their efforts will receive the endorsement of the whole community.

## TASMANIAN APPLE GROWERS.

## Bounty Sought on 1933 Exports.

A deputation of Tasmanian fruitgrowers waited on the Premier (Mr. McPhee) and the Minister for Agriculture (Mr. Wardlaw) early in August. It was stated that many growers were facing ruin, having incurred debits for large consignments of Apples which had arrived in England in perfect condition. The trouble, it was said, was caused largely by the protection policy of the Federal Government, and a strong request should be made for a bounty sufficient to bring the f.o.b. price of Apples to 4/6 per bushel. In reply, the Premier said the Government was in complete accord with the request and would do all in its power to secure the bounty.

## TASMANIANS CONSULT PRIME MINISTER.

A deputation representing the Tasmanian Government, fruitgrowers and shippers, waited on the Prime Minister, Mr. Lyons, during his visit to Hobart, on August 18. The seriousness of the plight of the fruit industry was stressed, and a bounty asked for to bring the price to 4/6 f.o.b. The Prime Minister promised to place the matter in detail before Cabinet, but he could not hold out hope of a definite subsidy. There might, however, be some other way in which the Federal Government could assist the growers, and he would take up the matter as one of extreme urgency with the Federal Cabinet.

The Prime Minister referred to the huge quantities of Apples which had arrived in U.K. simultaneously—1,500,000 cases during June, and another 500,000 cases early in July. Growers and their representatives should organise to prevent gluts in future.

## S. African Fruit Export.

The South African fruit industry has requested the British authorities to determine quotas limiting foreign imports into U.K. The South Africans point out that large shipments of Spanish and Californian fruit originally for Continental markets had been diverted to Great Britain with disastrous results to South African exporters.

## PERSONAL.

Mr. R. J. Watson, Perrickoota, Moama, N.S.W., has been appointed a director of the Victorian Central Citrus Association, to fill the vacancy caused by the resignation of Mr. J. S. Cotton.

Mr. C. H. Beaumont, Horticultural Instructor and Inspector for over 20 years, was bidden farewell by his fellow officers in the Department of Agriculture, South Australia, on July 29. A wallet of notes was presented by Professor A. J. Perkins as a parting gift. In his speech, Professor Perkins said that Mr. Beaumont had been a most efficient officer and would be very much missed in the district in which he had been working. Mr. Quinn also spoke in favorable terms of Mr. Beaumont, who suitably replied.

Orchardists will be pleased to learn that Mr. Bruce Smith has joined the staff of the "Lightning" Fruit Grader Co., of 517 Albion-street, Brunswick.

Mr. Bruce Smith has had a long experience in the manufacture of orchard implements. He is well and favorably known to all growers throughout Australia as the manufacturer of the well-known "Smithco" line of implements, and inventor and patentee of the "Smithco" Friction Tractor Lift—a power lift of exceptional value.



## South Australia.

### Rising Water Table.

Renmark (20/8/33).

For some time past the rising water table on the Block E and Chaffey irrigation areas has occasioned some concern to the officers of the Department of Lands, and to the owners of the various blocks affected. During the last three years it has been under close observation by Mr. A. C. Gordon (officer in charge), and from gaugings taken at various intervals, a steady rise has been noted which has affected Apricot trees in various parts of the area.

It is feared in many quarters that unless some steps are taken to reduce the amount of water applied to the porous types of soil, the trouble might later on affect vines. A scheme has been suggested whereby a drain-pipe line or open cut canal should be made to connect up from the main source of trouble to the Ral Ral Creek. This presents no engineering difficulties, and therefore it commends itself to the growers. This area of Block E and Chaffey comprises more or less of an alluvial soil, stretching from the Polygonum flats adjacent to the river, almost to the rising sandy foothills.

This was opened up for the repatriation of returned soldiers in 1920-21, and is in extent some 3,000 acres, comprising soils of splendid fertility. It is chiefly planted with drying varieties of Grapes, although some scattered plantings are put to stone fruits and citrus. This area was the first to have a thorough soil survey made by the Council of Scientific and Industrial Research, working through the Waite Research Institute in Adelaide. Messrs. J. K. Taylor, B.A., M.Sc., and H. N. England, B.Sc., carried out the work, which was completed about 1928, and compiled in bulletin form (No. 42).

At the time of the soil survey, Mr. J. K. Taylor gave a field day, illustrating the lay of the soil by means of a pit about 6 ft. deep, showing the various soil strata, and while at the pit side a prophetic remark by Mr. Taylor was as follows: "This soil shows no sign of a dangerous water table at present, but I would advise the man on this type of soil to be careful with his water in the future."

This warning went unheeded, with the result that the block upon which the test pit was sunk, and several others on the same type of soil, are showing a rising water table which is anything but pleasant. Following on the soil survey work, it was realised by the officers of the C.S.I.R. that if less water had to be used, some investigational work would be necessary by that body, so that definite recommendations would be possible from data collected from all types of soil. This work has been in the hands of Mr. A. V. Lyon, M.Sc., and has been in progress for two years, but is not yet sufficiently conclusive to be published. It may take another year before sufficient evidence is obtained to be definitely sure of conditions under varying seasonable circumstances.

In every instance where the water table has become uncomfortable, it has occurred when a porous soil happens between two clay types, thus forming a basin from which there is no escape for superfluous irrigation water. In a lecture recently by Prof. Prescott, to the Block E Agricultural Bureau, which was attended by over 100 growers, the lecturer dealt with the aspect from every angle, and giving a very detailed description of the work carried out at the Griffith (N.S.W.) Research Station by Mr. Eric West, B.Sc., M.S., in the matter of absorbing surplus soil moisture by means of growing lucerne, and various other green crops such as clovers and legumes.

This work has been brought out in Bulletin No. 74, and if the observations contained therein will be noted, it will have a big influence on the irrigation areas. This Bulletin, besides indicating the usefulness of plants as a de-watering agent, shows the influence of atmospheric pressure and temperature in its relationship to rising and falling water tables.

Graphs shown in this Bulletin indicate a regular rise during the day time and a consistent fall during the night, on a water table within the influence of a depth affected by temperature. There is also a graph in which the water table at a greater depth follows closely the barometrical readings. But by far the most important work is that dealing with plants and their usefulness to counteract seepage and waterlogging.

### The first irrigation

of the season commences on August 4, and is expected to be completed about the end of August. A complete electrification system now connects all pumps with No. 1. Previously, the five pumping stations all had their separate plants with a staff of firemen, engineers, woodpiles, etc., but by installing a powerful generating plant at No. 1 pumping station, a very great economy is affected, which will eventually reduce the water rates.

The seasonable work of pruning is now almost complete, hastened no doubt by the announcement of an early watering.

### Green manure crops

have in many instances already been ploughed under while the later planted ones will be ready after the irrigation. The writer has been hammering away for many years at the necessity for green manuring, and it is with a great deal of satisfaction to note the steady yearly increase in acreages planted. Beans have predominated this year, but have been affected with aphid and frost, but on the whole the stand has been extremely satisfactory.

Another matter of importance is the number of growers who are planting these green manure crops in every row instead of in every alternate row; thereby gaining a two-year supply of organic matter in one year.

Many schemes have been suggested to absorb the unemployed, and one suggested recently by the chairman of the Cobdogla District Council has received much publicity in S.A. It is suggested to establish fifty families on small irrigation holdings which would be self-supporting in the course of time. The Loveday area (about 18 miles from here) has been selected in the proposal. This area has had hundreds of thousands of pounds spent upon it in the course of preparation for repatriation, but owing to a slump in dried fruits prices in 1922-23, the scheme was abandoned. Lands were cleared, fenced, and laid out with a complete set of Hume cement pipes, but has never been opened for closer settlement.—"Nemo."

### SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

A meeting of the Executive of the S.A.F.M.A. was held at Adelaide on July 28. There were present: Messrs. H. J. Bishop (Chairman), H. N. Wicks, J. S. Hammat, D. W. Hannaford, R. O. Knapstein, R. B. Pritchard, W. E. Dearman, F. B. James, R. A. Cramond, A. O. Peterson, J. B. Randell, W. W. Miller, A. R. Willsmore, P. R. B. Searcy, T. Playford, and the Secretary.

**Railway Trucks.**—In response to a letter sent to the Railways Commissioner suggesting the desirability of the

(Continued on page 484)



# Re-Working of Fruit Trees.

Successful Methods Described and Illustrated.

(By Carl Sandberg, "Killara," Swan Point, West Tamar, Tasmania.)

(All Rights Reserved)

**I**N RESPONSE to requests for a description of the method used in re-working two acres of my Apple trees, I have compiled the following notes, which, I trust, will be of some practical use to readers of the "Fruit World."

The two acres referred to contain trees ranging from five bushels to fifteen. I did not like the idea of cutting the trees hard back, then grafting, then waiting ten or twelve years before they settled down to profitable fruiting. I considered life too short for that, so I was always on the lookout for some method, whereby a tree could be changed from one variety to another without the long years of waiting.

Some five years ago I met Dr. Nelson, of our Department of Agriculture. I asked him if he had seen any new method. He had, in California, but they would not show him how the operation was performed. They called it plug grafting. He mentioned that as far as he could see they bored a small clean hole in the bark and wood, a scion was carefully prepared to fit the hole, and so shaped that when it was driven home it did not burr the bark on the scion up. The Department, he said, had tried, but did not have any success. I tried this method in a small way with very poor results.

The following spring I heard of an orchardist who was re-working some trees over by grafting to laterals cut back hard. Upon investigation I did not like this method, owing to the probable trouble of dormant base buds continually shooting, its general awkwardness, and in many instances suitable laterals are not close enough together.

However, I noticed that in some instances where the laterals were very wide apart, an odd scion had been let in under the bark of the main limb. I saw at once the possibilities of this idea.

I immediately made inquiries, and was very fortunate in securing the services of Mr. E. Floyd, who had had experience in various methods of grafting, including the above, and it is to him I have much to thank for the successful carrying out of what seemed an almost endless job.

In October of 1930 we set to work on 40 trees which I had trimmed up—everything cut as closely to the main arms as possible, so as to cut out most of the dormant base buds. It was a very tedious performance, inserting thousands of scions, then binding each one with raffia, then covering each with hot grafting wax. The cost worked out at £1 per tree. The "take" was exceedingly good; I would say over 99 per cent. They grew excep-



Top left: The first cut in the bark graft.

Top right: The second cut showing the bark cleanly levered out by the blade of the pruning knife.

Bottom left: The scion firmly placed in position with the small nail in position for driving. (Do not confuse shadow of nail with nail).

Bottom right: The scion greased over with petroleum jelly.



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tionally well, as can be seen in the photo. on this page, which shows the tree just as it was finished and the same tree some months after—this is an average specimen.

After this very satisfactory example I was convinced that this method was what I had been looking for. My next problem was to reduce the cost per tree. Before the next spring (1931) I found that beeswax was almost unprocureable—I needed about 1½ cwt. grafting wax. This made me look for a good but cheaper substitute. I found that crude petroleum jelly was a splendid success, and had the very decided advantage of not requiring any heat to melt. It was merely necessary to spread it over the cut bark and base of scion, as it did not crack like ordinary grafting wax; it also prevented woolly aphis from attacking the fresh cut.

Crude petroleum jelly is marketed by the Shell Co. of Aust., the price being in the vicinity of 5d. per pound.

We had tried out the waxed tape system, but gave it up. We then had the idea of

nailing a few scions on with very fine short nails. After a few days we considered we had 100 per cent. take by this method. So we went ahead with it. Practically every scion grew remarkably well, many making 3 ft. of growth. The nailing on of the scions was many times faster than the binding, and this together with the petroleum jelly reduced the cost to approximately 9/- per tree.

Last spring (1932) we could not improve on these figures. Many growers from all parts of Tasmania came to see for themselves these re-worked trees, and the only objection to it that I could gather was that the scions would not grip the main arms strongly enough to prevent them from being pulled out by the weight of fruit. However, this fruit season I

picked up to eight bushels



Left: A tree re-worked in October. Photo taken just as re-working was finished.

Right: The same tree in February.

from some of the re-worked trees, the whole season was exceptionally windy, and as far as I can see, no scions have been broken off.

There is not the slightest sign of the dreaded die-back, the cuts made on the trees three years ago have grown over remarkably well, and in many cases can hardly be seen now. The trees are growing more vigorously now than they were before they were re-worked. I consider this method far superior to the one described in your July issue. I personally know of a number of growers who have tried this method, none with good results, some with ghastly results. These still have the holes in the limbs to contend with. I have also tried the budding system, but do not like it.

#### Successful Methods Described.

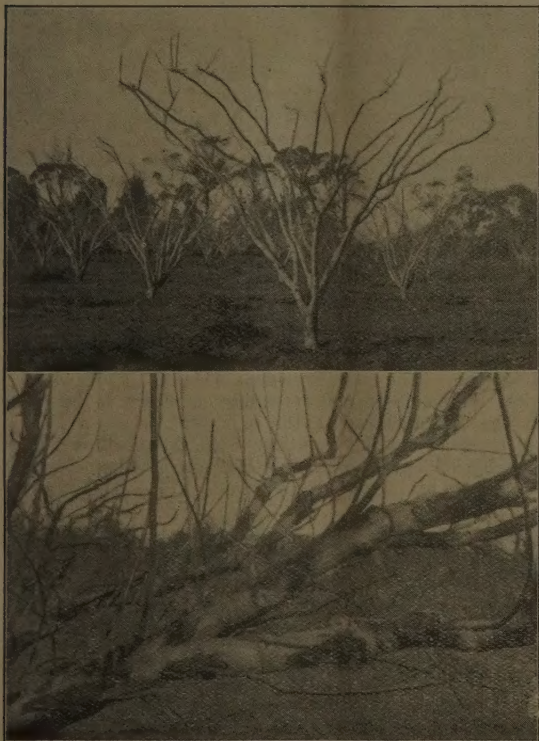
The method for treating the trees to be re-worked, the scions, and the method of the actual graft are very simple.

Any time during winter or early spring, cut all laterals and spurs off as closely as possible to the main arms, leaving all growths and spurs above where the arms are less than ½ inch diameter. This top is cut off when the tree is being grafted. (Any time from when the bark will run till early December.) The few scions on the top of the tree, where arms are thin, are tied with raffia, not nailed, as arms are not firm enough there for nailing.

The scions want to be of all sizes—thick ones for the lower thick bark, and thinner ones for the thinner bark. The buds on same want to be well developed—not poor small tight ones. Store scions on top of the ground in shade, put bags all around them, heap dirt around and on top. Keep earth slightly damp. Should scions show signs of sprouting, open up heap for a day, and allow to dry out slightly, then put bags and dirt back again.

Cut scions about 4 to 5 buds long for the thicker bark, about 3 buds long for near the top of limbs, specially on weak trees. It is best to cut fresh scions each night for the following day's work, but scions will keep for some days, even if left uncovered.

Note in illustration how scion is cut. Cut from the base of a bud to a point; the length of cut is generally about 1½ to 2 inches. The longer the scion the longer the cut. (Cutting from the base of a bud throws the scion out at a greater angle from the arms of the tree.) Then cut small slice from edge of scion, making a right-angle edge. Turn scion around and cut small piece of bark from the point, slightly to the side opposite the small slice. All cuts to be clean and straight. The cut in bark is an inverted L. With a pruning knife make a straight cut up or down the bark, then across top, lever bark



Top: A block of trees trimmed up ready for re-working in the Spring.

Bottom: A close up photo of scions grafted last October.



clearly away from wood with blade of knife. Insert scion and push well home, so as it is firmly held by bark.

Special care must be taken to see that the barks on scion and main arm meet.

Now drive small fine nail through bark levered up (which is now half over scion), through side of scion, and drive gently home. When nail is driven in, it should keep scion tightly up against the bark and main arm. Cover with the petroleum jelly, and make certain it is airtight, specially behind graft. Before starting next tree look over all grafts to see if any air holes have been left. We use two sizes of nails; for the thin bark  $\frac{1}{8}$  in.; for thicker bark  $\frac{3}{8}$  in. When growth starts, odd dormant buds from the original tree will appear. Wait until these are about two inches long and pull out. After the first growing season very little trouble is experienced with these.

### SOUTH AUSTRALIA.

(Continued from page 480)

Railways Dept. obtaining 8, 10, 12 ton louvered trucks similar to those in use on Victorian Railways, Mr. Ferry (Railways Dept.) attended and Mr. Bishop gave instances of how unsatisfactory the large trucks in use at the present time were. He also illustrated the unsatisfactory timetable on certain lines, particularly Pinnaroo district.

A.O.T.A. Conference.—Mr. Bishop reported re A.O.T.A. Conference in Sydney. Subsequently a deputation waited on the Prime Minister, Mr. J. B. Mills representing the S.A.F.M.A. Progress was reported re developments to date.

Letter received from O.S.R.A., stating enquiry re 50 tons refrigerated cargo per week to Colombo and/or Egypt had been passed on to individual shipping interests for attention.

The S.A. Government Produce Department forwarded a report from the S.A. Trade Commissioner in London, stating that certain varieties of Apples suffered in price because specified under "counts" instead of sizes. Buyers did not like Australian fruit branded under "counts," and were only willing to pay lower prices for such.

Junior Apple Packing.—Mr. C. A. Chesterfield, Head Teacher, Public School, Clarendon, wrote re materials required for Apple packing classes. Mr. Pope suggested formation of packing classes in various Apple-growing districts. It was resolved to donate a trophy valued £2/2/- to winner of competition to be held at Royal Agricultural Show, Adelaide, to be opened to scholars under 14 years.

Research Sub-Committee.—Resolution passed by the Research Sub-Committee in reference to the commission appointed to enquire into the activities of the Government Produce Dept. was submitted by Mr. Wicks, and explanations made by Messrs. Wicks and Playford. After consideration it was resolved that the Association take no action in the matter as a body. Mr. T. Playford offered to arrange for any members who wish to give evidence on the subject to appear before commission.

### SOUTH AUSTRALIAN NOTES.

The Secretary of the S.A. Fruit-growers' Association (Mr. W. J. Kimber) has been seriously ill, but he is now back at his duties again.

S.A. Tomato exports to the Melbourne markets have commenced. Indications are that the plants this year are fairly free of disease, and unless anything untoward happens, the quality of the fruit exported should

be good. Satisfactory agreements have been reached with the Adelaide merchants and the Melbourne selling agents. The prices realised in Melbourne for the few consignments that have been disposed of have been considerably lower than the early prices of other years. However, the weather has not been at all satisfactory and stocks have not cleared well in consequence.

Unfortunately, heavy floods have affected some growers, but provided

### SOUTH AUSTRALIA.

**A**N executive meeting of the S.A. Fruitgrowers and Market Gardeners' Association was held on Friday, August 25. Business discussed included report from Tomato and Celery Sections on export arrangements; consideration of alterations in Food and Drugs Act and the finalising of arrangements for the annual conference on Friday, September 29, 1933.

At the meeting of the executive on July 28, Mr. G. Jennings presided. Members present were: K. Harrison, C. H. Ragless, J. Donaldson, C. Ridley, W. H. Ind, A. O. Peterson, L. G. Heading, W. H. Packer, W. J. Bishop, F. C. Staniford, F. Hughes, R. Cramond, W. W. Miller, N. T. Hobbs, F. G. Gill, J. Turner, R. B. Pritchard, J. B. Randell, and L. J. Wicks. Apologies were received from Messrs. T. Playford, M.P., and H. H. Schultz.

The following members were appointed to confer with the S.A. Fruit Marketing Association in an effort to increase the consumption of fruit in South Australia:—A. O. Petersen, G. Jennings, W. J. Bishop, L. J. Wicks.

Mr. Rex Quinn gave directions as to the correct way to prepare Bordeaux and Burgundy sprays.

Assistance was sought to provide paper, Apples, etc., required by children who were being taught Apple packing. It was thought the parents should provide this.

It was decided to invite Messrs. G. Quinn and R. Fowler to attend and address the Conference on Conference Day, on September 29, on matters concerning the fruit industry. Mr. Wicks reported in connection with the Tomato and Celery Sections.

\* \* \* \* \*

The annual meeting of the Marion Branch of the S. Aust. Fruitgrowers and Market Gardeners' Association, was held on August 2. Mr. I. R. Adams occupied the chair. Apology was received from Mr. Kimber. The Secretary, Mr. Ray Duncan, read the report, which was received with appreciation. Mr. Duncan has been Secretary of the Branch for ten years and was presented with a cheque as an act of appreciation for his services.

Election of officers:—President, C. E. Hawker; V. Pres., Geo. Parsons; Sec., Ray Duncan; Asst. Sec., R. G. Western; Auditor, H. Norman; delegates, G. H. Parsons and M. G. Franklin; publicity officer, H. N. Western.

Mr. Jennings addressed the meeting, after which many points were discussed. He appealed to all members for continued helpfulness in their work for the branch.

\* \* \* \* \*

The next monthly meeting of the Marion Branch will be held in Sturt Library, on Wednesday, September 6, at 8 p.m. The new President (Mr. C. E. Hawker) invites all members and intending members to be present at the first meeting of the new year.

The usual monthly meeting of the Campbelltown Branch will be held at St. Martin's Hall on Monday, September 11, at 8 p.m.

the water can be drained away fairly quickly the damage may not be as bad as at first anticipated.

Celery is still being exported in fairly heavy quantities, and it is expected that shipments to the Melbourne and Sydney markets this year will create a record for this section. The recent heavy rains are expected to be beneficial to the late Celery crops, and an improvement in general quality should be evident.



# Tree and Stump Pulling

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stump pulling, it is a matter for congratulation that an Australian invention has won world-wide recognition.



"Out."—The Stump shown above successfully grubbed with the Trehwella Horse Grubber.

a danger of the growth of fungus diseases on the dead and decaying roots. Failure to remove these dead roots has been a frequent and unsuspected cause of root rots

Powerful, effective, possessing great strength and durability—yet easy for man or boy to operate.

and ill-health in orchard trees. Take it for granted then that stump removal is of vital importance.

The Trehwella Monkey Jack is estimated to save 70 per cent. labor, time and money, turning an arduous and expensive operation into a one-man job. It is a matter of wonder that this implement can fell trees, pull stumps, roll logs and lift stones with ease. In grubbing stumps a trench is dug and a few surface roots cut, a grip being obtained on the body of the root, the stump can be easily tipped over, tearing the lower roots clean out of the ground. The ten-ton Monkey Jack is powerful, and used for heavy grubbing of all kinds.

The Monkey Winch is used for clearing land, and also for the raising of waggons or motor cars when ditched, pulling animals out of bogs, lifting trees, etc. It is useful in mining work and contractors appreciate it because of its

Remove stumps and dead roots, else look out for root rots on orchard trees.

power, speed and portability. The Trehwella Monkey Winch passed a British Government test under the Ministry of Agriculture, extracting 29 stumps in 2½ hours. It also received the silver medal of the Royal Agricultural Society of England.

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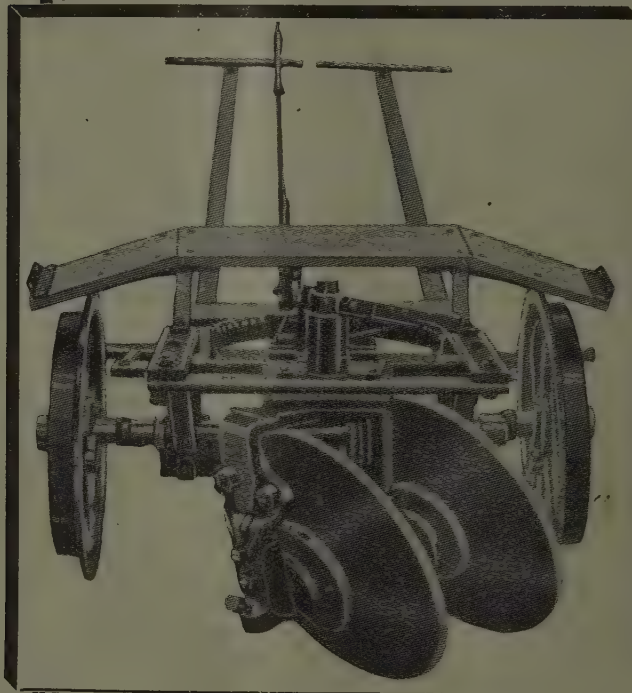
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Rear view of "Harvey" Two-furrow Reversible Hillside Disc Plow, showing hillside seat and three-horse hitch.

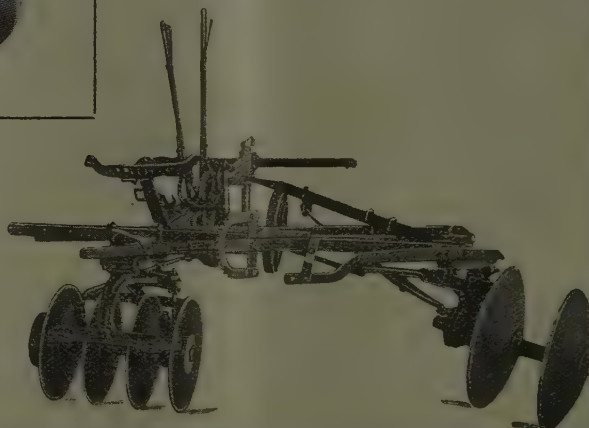
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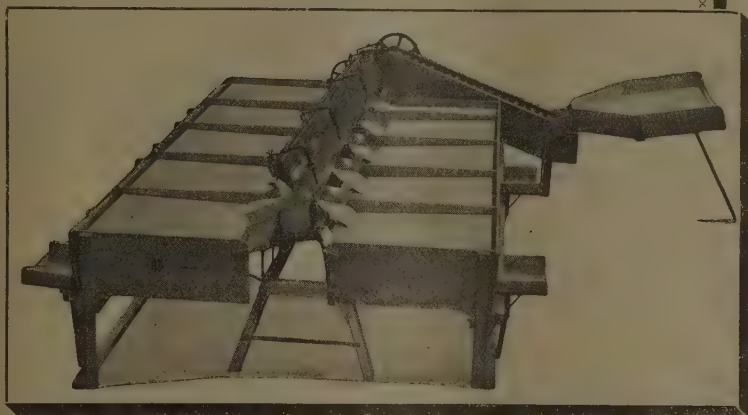
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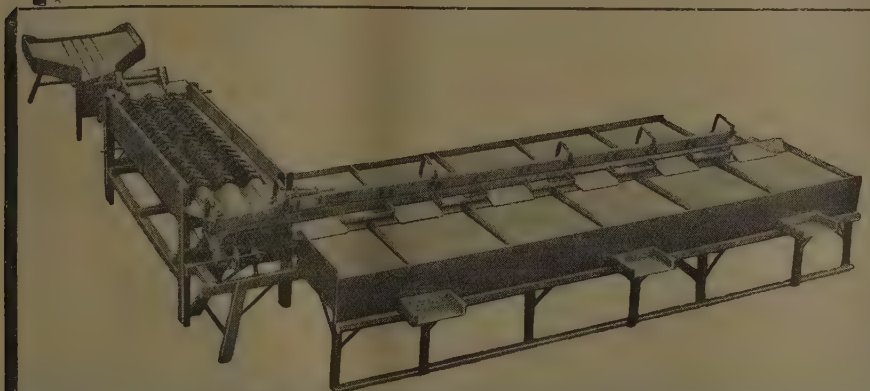
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Paint the roosts lightly with  
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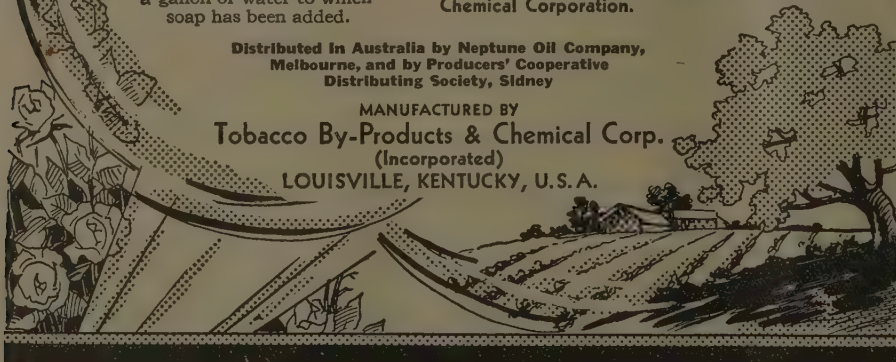
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# Manuring the Orchard.

(By F. M. Read, M.Agr.Sc., Senior Horticultural Research Officer, in "Victorian Journal of Agriculture.")

THE USE OF ARTIFICIAL FERTILISERS on such perennial crops as fruit trees is designed to fulfil two functions—firstly, to increase the crop, and, secondly, to maintain tree health. But it is questionable if the outlay on fertilisers applied to vigorous healthy trees will be recouped by the anticipated increase in crop. It is believed by many that artificial fertilisers applied to quite healthy trees will increase the crop, but the results of innumerable experiments throughout the world fail to confirm this view. On the other hand, it may be a thoroughly sound investment to apply fertilisers of the right kind to trees suffering in health because of a lack of these elements in the soil, even though the crop be not appreciably increased for some years. Where fertilisers further a more healthy growth and appearance in trees previously unsatisfactory in health, they usually improve the yielding capacity of the tree also. When tree health suffers, the grower must apply fertilisers to conserve his main asset.

"Which fertiliser makes fruit?" is a question sometimes asked by growers. In answer it may be said that no fertiliser makes fruit as distinct from growth, but that any one or all of the fertilisers may affect the growth characters of a tree, and thus indirectly affect its yield.

There are very good grounds for believing that if tree growth be satisfactory, yield automatically will be so; from which it would follow logically that growers should decide their manurial practice more upon the appearance of their trees, and less upon the crops they have borne or are expected to bear.

The subject may be viewed from a slightly different angle by asking and answering a further question: "In the event of a shortage of any element is the growth and foliage first affected, or does the yield decline while the tree, to all other appearances remains normal?" The available evidence suggests that the first signs of a mineral deficiency are to be seen in the foliage. Experiments at Upper Beaconsfield on a poor soil which quickly suffers in productivity when fertilisers are withheld have shown that unmanured or improperly man-

ured trees do not make anything like the amount of growth made by those on adjacent manured plots, nor is the appearance of the foliage satisfactory; but during the three years of the trials the yields of the unmanured trees did not decline seriously by comparison, although it is obvious that if faulty growth conditions be allowed to persist they must soon result in low yields.

In England the disease known as leaf scorch, which has been associated with potash deficiency, has been extensively studied. It has been found that, in the case of Plums, the deficiency is marked in leaves and stems, which, when analysed, are seen to contain very much less potash than normal specimens; but this deficiency is not nearly so marked in the pulp of the fruit, while in the fruit kernel of the affected tree the potash content is practically normal. This is a further indication that when the tree is starved of any particular element—in this case, potash—the leaves and shoots suffer long before the vital organs—the fruit, and seed. This is in accord with the effects accompanying starvation of the animal body, where the vital organs remain perfectly sound until a very late stage in the process of starvation.

This leads again to the very important conclusion previously mentioned that if the tree is growing in a healthy, vigorous fashion it is a sign that the yield of the tree is not likely to be suffering from a shortage of any mineral, and that conversely the yield of that tree will not be increased materially by applications of fertilisers.

On the other hand, it points to the necessity for maintaining healthy growth, for only when that is obtained will the tree continue over a period of years to increase its bearing surface, and thus its ability to carry larger and larger crops.

There are orchards on soil quite rich enough to supply the whole mineral needs of the trees, and on such soils growth will be healthy without manure, while the benefit to be secured from fertilisers would be negligible. There are, nevertheless, many soils which will not give the growth desired, and on these the fertilisers suitable to them will prove of inestimable benefit.

Plate 1.—A general view of the pot experiments in the orchard at Burnley Gardens.





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Plate 2.

Plate 3.

There is room for a great deal of experiment, not only in the trying out of fertilisers on orchards previously somewhat neglected, but also on heavily-manured orchards on rich soil, where it would be of great interest to leave some trees entirely unmanured for comparison.

#### Types of Fertilisers.

The quick-acting inorganic fertilisers are to be preferred in most cases to the organic types which are made available more slowly over a long period.

Nitrogen, in the form of sulphate of ammonia; phosphoric acid, in the form of superphosphate; and potash, in either the sulphate or muriate (except in the saline areas where the muriate should not be used) should supply the needs of most orchards. All of these will not be needed in every case.

The following general recommendations are given briefly:—

In particular, the quantities of fertiliser to be applied will vary with tree size.

Deciduous trees in the southern part of the State may be given 2 to 3 lb. per tree of mixed fertiliser containing two parts of sulphate of ammonia, two parts of superphosphate, and one part of sulphate or muriate of potash. This is known under the general name of the 2:2:1 mixture, and is much superior to the older complete horticultural manures.

Plate 2.—Potash deficient leaves (front and back) showing the characteristic marginal scorching which usually develops in late summer.

Plate 3.—Nitrogen deficient leaf of yellowish green throughout growing season (right) and bright yellow at defoliation (left).

In the north of the State, particularly the Goulburn Valley, sulphate of ammonia is probably the best spring fertiliser to use. When a grower desires to use a complete fertiliser, the 4:4:1 mixture, i.e., four parts of sulphate of ammonia, four of superphosphate and one of potash, is his best choice. In each case a dressing of 3 lb. per tree would be a reasonable average. Citrus trees should receive sulphate of ammonia at the rate of about 3 lb. per tree in spring, and a similar dressing in autumn.

Young trees are sometimes manured, but it is doubtful if this practice is an economic one. If the ground has been well prepared, and the trees not allowed to suffer from weed competition, they will usually grow normally without fertiliser for the first year.

#### Pot Experiments on Apple Trees.

During the last two seasons experiments on Apple trees grown in 18-in. pots of well-washed sand, and watered with nutrient solutions, have been conducted (see Plate 1). The object of these experiments is to determine the symptoms that develop when each of the principal fertilising elements in turn is omitted from the diet of trees which receive, with the exception of this one element, a complete plant food.

While it is not intended, at this stage, to discuss in detail the results of these experiments, it may be stated that trees growing under orchard conditions exhibit many

Plate 4.—Potash deficient tree showing defoliation of tips of affected shoots.

Plate 5.—Nitrogen deficient tree showing very reduced growth and defoliation commencing at base of the tree.



Plate 4.

Plate 5.



# Fruit

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of the symptoms developed by the trees in the experimental pots; and it is hoped that the similarity of the symptoms will enable the manurial requirements of Apple orchards to be determined from the appearance of the leaves and general growth characters. To the general recommendations given above, the Apple-grower therefore may add the following details:—When serious scorching of the margins of the leaves occurs (see Plates 2 and 4), and is not attributable to spray injury, potash alone—up to 3 to 4 lb. per tree—should be given. Dressings of nitrogen should be avoided. Leaf scorch due to a deficiency of potash usually affects the tip leaves of a shoot rather than the basal leaves, and results in premature defoliation of the tips of shoots as seen in Plate 4. Spray injury, on the other hand, usually affects the older basal leaves, subsequent leaf growth being unaffected.

When the leaves of the tree are small, more yellow than is normally the case and bright yellow before defoliation (see Plates 3 and 5), and when length growth is scanty, and the bark reddish and unhealthy nitrogen—as sulphate of ammonia—should be applied alone at the rate of 2 to 3 lb. per tree, for a few years.

#### Applying the Fertiliser.

For maximum effectiveness, fertilisers should be applied to deciduous trees two to three weeks before bud burst each spring. Evergreen trees such as citrus should receive a spring and autumn dressing—in each case, just prior to the growth period.

The effectiveness of a manurial dressing may be influenced greatly by the method of application. It is certain that much of the material broadcast on the surface never reaches the tree's root zone, some being absorbed by the roots of surface plants, and some held by the top layer of soil and rendered relatively unavailable to the trees.

It is imperative that the fertilisers be introduced into the actual root zone of the trees, preferably by spreading on the surface and then ploughing under.

Another method is to plough a single deep furrow on either side of the row of trees, and place the manure deeply in this furrow; but a somewhat better plan, though not so rapid, is to furrow out as described above, and then cross furrow in the same way, providing a furrow for the manure right round the tree.

It is probable that many of the failures to obtain results with fertilisers on fruit trees are due to the lack of proper methods of application, and experiments along these lines are at present very necessary. It is even possible that in the future such compounds will be forced deep into the soil by means of specially-constructed power units.

**Black Spot Sprayings.**—Spray with Bordeaux mixture (6-4-40) at spurburst stage; then with lime-sulphur (1 in 14), 26 degrees Baumé, at "pink" stage; again with lime sulphur (1 in 35), 26 deg. Baumé, at "calyx" stage, when the petals are falling, combined with arsenate of lead for codlin moth. Lime sulphur (1 in 35) may also be combined with the first, second, and third "cover" sprays of arsenate of lead, if necessary.

It is not advisable, states Mr. H. Broadfoot, to spray Trevitt Apples or coastal-grown Williams Pears with lime-sulphur after spur-burst, while summer applications of lime-sulphur to Josephine Pears will cause defoliation and dropping of the fruit.

Good results have been obtained in spraying Williams Pears on the coast by using Bordeaux mixture 6-4-80.

## Canned Fruits.

### 1933 Pack a Record.

#### Britain May be Asked to Impose Quotas on Foreign Canned Fruit.

AT the annual meeting of the Shepparton Irrigators Association, in August, it was stated that this season's pack was a record. This was due chiefly to the canneries being offered an export guarantee from the sugar fund. The British market for canned fruits had been materially affected by the uncertainty of America's financial policy. It might be necessary to approach the British Government, through Federal Parliament, asking Britain to impose quotas on foreign canned products.

The following office-bearers were elected:—President, Mr. J. G. B. McDonald; Vice-Presidents, Messrs. W. L. Eliason and M. G. Wright; Treasurer, Mr. A. A. Dobson; Secretary, Mr. N. W. Fairless; Committee, Messrs. E. W. Beckham, T. C. James, N. Hanlon, R. Marshall, J. J. Young, W. P. Stephens and E. James.

The annual levy was fixed at 9d. a ton on canning fruit.

**Shepparton.**—During August the Shepparton Fruit Preserving Co. Ltd. made a final payment of between £29,000 and £30,000 to growers for deliveries of fruit, bringing the total payments for the season to about £100,000.

**Leeton Cannery.**—At a well-attended meeting of fruit-growers, the following resolutions were passed:—

"That as many orchards are being reconstructed, and as world markets are unsettled, the State Government be requested to continue the present control of the Leeton cannery until such time as normal conditions are restored."

"That in the event of the Government deciding to dispose of the cannery the Leeton Fruit-growers' Co-operative Society is prepared to organise the canning fruit-growers on the Murrumbidgee irrigation area with a view to assuming control of the cannery on a co-operative basis."

### CANNED FRUIT PRICES IN U.K.

Advice has been received by the Australian Fruit Canners' Association from the Canned Fruits Control Board, that after consideration of recommendations made by the London Agents' Advisory Committee, the Board has decided to reduce the minimum prices to be observed in respect to the sale of Australian canned fruits in Great Britain. The amended prices, which operated as from July 29, read as follows:—

**Apricots**—2½'s: Choice 8/-, standard 7/-, seconds 6/6. One's: Choice 4/9, standard 4/6.

**Peaches** (halves and sliced)—2½'s: Choice 7/6, standard 6/6, seconds 6/-, One's: Choice 4/6, standard 4/3.

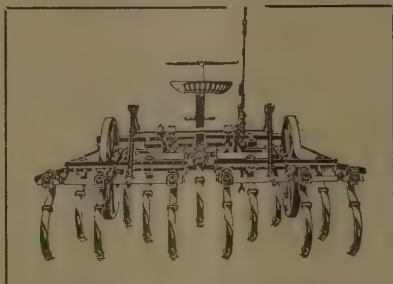
**Pears**—2½'s: Choice 8/6, standard 7/6, seconds 7/-, One's: Choice 5/3, standard 5/-.

It will be noted that no reduction has been made in either choice 30 oz., or in 16 oz. fruits.

The terms and conditions of sale remain as advised in the above-quoted circular, except that contracts may now provide for a fall-in-price clause on orders unshipped or afloat.



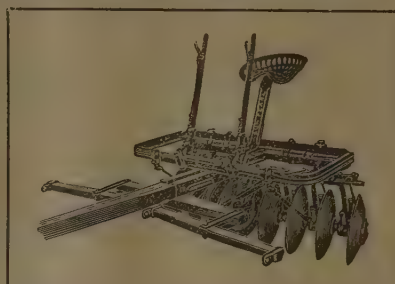
# Australian Made Orchard and Vineyard Implements



## Sunglow Low-wheel Tyne Cultivator

With Spring or Rigid Tynes. With Pole and Swings or Forecarriage. 7 tyne x 3 ft. 4 in.; 9 tyne x 4 ft. 4 in.; 11 tyne x 5 ft. 4 in.; 13 tyne x 6 ft. 4 in. May be fitted with points 1½, 2½, 4, 5 or 6 in. A favourite for small area work.

to  
Suit  
Australian  
Conditions



## Sunpearl Disc Cultivator

Discs 16 inch or 20 inch in two gangs. Extensible for any gap up to 2 feet.

Reversible for in-throw or out-throw.

Sizes—8, 10, and 12 Discs.

Forecarriage or Pole and Swings as desired.

VISITORS TO THE MELBOURNE ROYAL SHOW ARE INVITED TO INSPECT THE FULL RANGE OF SUNSHINE ORCHARD AND VINEYARD IMPLEMENTS ON THE SUNSHINE STAND, NO. 82, SKENE STREET, SHOWGROUNDS.

# H. V. McKAY'S

## Sunshine Farm Implements Sunshine Harvester Works, Sunshine, W.20

(H. V. McKAY - MASSEY HARRIS PTY. LTD.)

# Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof BREMEN Germany

Cable Address: "Orange," Bremen

Established 1902



Fruchthof-Bremen

## AUSTRALIAN REPRESENTATIVES:

Victoria: J. B. Mills & Co., Aberdeen House, 528 Collins Street, Melbourne.

South Aust.: Messrs. Paterson & Co. Ltd., Adelaide.

West Aust.: Messrs. Paterson & Co. Ltd., Perth.

Tasmania: Messrs. H. Jones & Co. Pty. Ltd., Hobart.

# THIS BOY CANNOT STEAL AN ORCHARD

but—the Codlin Moth robbed many an orchardist of his profits until Arsenate of Lead was found to give protection from this worst of robbers. The Orchardist who uses "Aero" brand Arsenate of Lead gets the maximum protection for his fruit crop, and, in consequence, bigger and more profitable returns from Codlin-free fruit. "Aero" brand Arsenate of Lead has such a high arsenical content that it ensures the fullest protection against Codlin, yet its soluble arsenic content is so low that it will not burn or scald the foliage. "Aero" brand is indeed a superlative quality product, and is no dearer than inferior arsenates.



Keep down your losses through Codlin by spraying your apples and pears with "Aero" brand Arsenate of Lead.

## BICKFORD'S "Aero" Brand ARSENATE OF LEAD

*By every Test Bickford's "AERO" Brand is Best*

### INTERSTATE AGENTS:

NEW SOUTH WALES—  
BUZACOTT & CO., LTD.,  
7-11 Market Street, Sydney.

QUEENSLAND—  
BUZACOTT (QUEENSLAND) LTD.  
413 Adelaide Street, Brisbane.

TASMANIA (Northern Districts)—  
GARDNER & MCKENZIE PTY. LTD.  
64 Cameron Street, Launceston.

TASMANIA (Southern Districts)—  
PORT HUON FRUITGROWERS'  
CO-OP. ASSOCIATION LTD.  
Davey Street, Hobart.

VICTORIA—  
RAMSAY & TREGANOWAN LTD.  
409-477 Latrobe Street, Melbourne.

WESTERN AUSTRALIA—  
FELTON, GRIMWADE & BICKFORD  
LTD.  
207 Murray Street, Perth.



## A Striking View of the Huge Vats at our West Croydon Works—

The big vat in the foreground contains the slurry as fed to the filter press, where the moisture is expressed under high pressure.

After the filtering process is completed, the frames containing the Arsenate of Lead in paste form are taken out, and the cakes of wet Arsenate are placed on racks and sent to the drying rooms where the remaining moisture is removed under closely controlled conditions.

The dried cakes are then milled to a fine powder, which, in turn, is still further reduced to an impalpably fine consistency by a special air-float process. This ensures that there are no coarse, gritty particles in "Aero"



brand Arsenate of Lead. Because of its excessive fineness in texture "Aero" brand Arsenate of Lead suspends perfectly in the spray tank. It yields a spray of even mixture, with high covering power, and, there is no possibility of a choke in the spray-nozzle.

Orchardists tell us that they can spray all day long with "Aero" Arsenate without having to clear the nozzle from chokes.

We unreservedly guarantee that "Aero" brand Arsenate of Lead, in whatever proportion used, will give equal or superior control to that of any other brand used in similar strength.

SOLE MANUFACTURERS:

# A. M. BICKFORD & SONS LTD.

WHOLESALE MANUFACTURING CHEMISTS AND DRUGGISTS,  
42, 44, 46, CURRIE STREET, ADELAIDE.

Laboratories and works:

90-100 WAYMOUTH STREET, ADELAIDE; and PORT ROAD, WEST CROYDON.



## APPLE EXPORT—ITS PROBLEMS AND POSSIBLE METHODS OF SOLUTION.

(To the Editor, "Fruit World.")

Sir,—Owing to the fact that the Apple export season of 1933 has closed even more disastrously than the preceding 1932 season, and that many grovers are faced with ruin, and the whole industry with disaster, it behoves not only growers, but the Commonwealth Government also, to explore every channel that may lead to the preservation and stabilisation of an industry which has in the past contributed several million pounds sterling per annum to the income of our Commonwealth, and is the source of employment to thousands of our fellow citizens.

We have to realise first that British brokers this season advanced growers for the purpose of shipping, something like £2,000,000, and that a large portion of the fruit concerned did not realise the advance made, and we, as growers, must realise that these advances will probably not be forthcoming in the future unless we can place our export business on sounder foundations.

We have also to realise that the production of Apples and Pears has increased enormously during recent years, and is still increasing. The total export figures for these fruits this year are not yet available, but we know same to be about 6,000,000—two to three million cases more than the European market is capable of absorbing at prices profitable to producers. So that it would appear that we would have to find other uses and markets for something like two to three million cases a year—a stupendous task, but one not perhaps incapable of achievement if undertaken in the right spirit and by correct methods.

There would appear to be only two methods of approaching a solution to our present troubles, either of which would require Federal legislation to bring into operation. The first and more circumscribed would be a Federal Board of Export Control, somewhat on the New Zealand lines, whose chief aim would necessarily be:—

- (1) To endeavor to control shipping so that our fruit arrivals are spread as evenly as possible over the export season.
- (2) To attend to marketing and distribution at the other end, possibly in co-operation with New Zealand.
- (3) To endeavor to restrict export by the elimination of certain grades, sizes, and varieties, in an effort to limit export to the capacity of the British and Continental markets to profitably absorb our product. In this connection it would be wise for growers to bear in mind that an Export Board of Control as outlined would be largely moulded on the lines of, and by the Australian Apple and Pear Export Council, whose members consist of growers and shippers, the shippers principally representing principals in British and Continental ports, whose chief concern naturally, is to regulate supplies and maintain prices on their own markets without concerning themselves as to the effect that such a policy would have upon our own markets. The result would inevitably be that in years of high production only our choicest grades would be permitted export, and that our local markets would be glutted with our fruits far beyond the Commonwealth's capacity to absorb them.

The second, and more comprehensive method, would be a Commonwealth Marketing Board on the lines of the C.O.D. that has operated so successfully in Queensland

since 1922. This Board being concerned with the successful marketing of all Apples and Pears produced, would not only aim at regulating shipping, and distribution at the European end, and a curtailment of exports to British and Continental ports, but it would concern itself actively in the profitable absorption of the huge surplus at our own end.

It would probably, for the purpose of raising capital for its huge enterprise, follow the Californian and Queensland practice of imposing a five-years' loan levy of 1½d. or 2d. per case on all Apples and Pears produced in the Commonwealth each year. As the Board's activities would probably enhance the value of each case of fruit beyond this amount, the annual loan would probably not become burdensome to us, and would be regularly returned to us at the end of five years. As there are about twelve million cases of Apples and Pears produced annually in the Commonwealth, a loan levy of 2d. per case would produce £100,000 per year, or a capital of £500,000 in five years.

With such capital we could set about exploiting our Eastern markets with confidence and success, and in the right way. The old idea that the East never changes and consists of millions of Coolies and a handful of fairly well-to-do Europeans, has long since been exploded. As an example, Hong-Kong imported less than £19,000 of fresh fruits twenty years ago—last year it imported over £1,000,000 of fresh fruits, chiefly from America—a little over £20,000 worth coming from Australia.

But we will have to reverse our methods if we wish to build up a huge trade with the East. At present we hold our fruit in cool store in Australia awaiting orders, and of course orders come (for we always have a few travellers in the East), but they never come in big lines, and they never will; cool stored fruit unloaded in the tropics, even if it arrives in good order, which is always problematical, must be disposed of in a few days, and these conditions definitely limit the scope of business—but that by no means is the only limiting factor. Every native of the East is a potential trader—it is born in him, but few of them will risk sending their documents or money to an unknown country to purchase fruit that will arrive in an unknown condition.

The Marketing Control Board, with half a million capital, could erect its cool stores in Bombay, Calcutta, Hong Kong, Singapore, eventually extending them to many more ports in the East, where the fruit would arrive fresh from the orchard, and have a comparatively long storage life, and where the large number of native traders could determine its quality before investing their capital, they are there in their thousands to hawk it and trade in it if they are permitted to inspect it before purchase.

But this is not the only advantage of having cool storage in bulk at the right end: at present we pay up to 5/- per case freight to send to the East from Sydney—little more than a quarter the distance to London—but with chartered boats the Board could do it for perhaps half that amount.

Apart from scientifically exploiting new markets, a Marketing Board faced with the many immediate problems that confront our industry, and forced perhaps not only to prohibit the export, but the marketing of some of our lower grades during certain seasons, or for periods during certain seasons, could encourage co-operative and private concerns in the production of cider and other by-products by an intensive advertising campaign.



# FOR A REAL SALES SERVICE

Under the Personal Supervision of the Directors

Consign Your Fruit to—

# Minear, Munday & Miller

Limited.

Fruit Brokers and Commission Salesmen

## COVENT GARDEN - - LONDON

Sole Selling Agents in London for  
THE SOUTH AUSTRALIAN GOVERNMENT  
FOR FRESH FRUITS.

An All the Year Round Clientele for  
APPLES, PEARS, and ORANGES.

Sales by PRIVATE TREATY or AUCTION as Desired.

N.S.W. Representatives.—MACDERMOTT & SHEEDY, Municipal Fruit Markets, Sydney.

West Aust. Representative.—A. HICKS, 18 William Street, Perth.

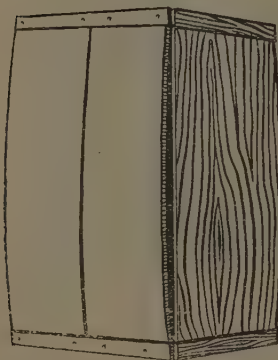
Victorian Representatives.—Messrs. GOLLIN & CO. PTY. LTD., 561 Bourke Street, Melbourne.

Bankers:—NATIONAL PROVINCIAL BANK LTD.,  
LONG ACRE, LONDON.

Cable Address:—"ORLEMFruit,"  
LONDON.

## The Gerrard Patent Box

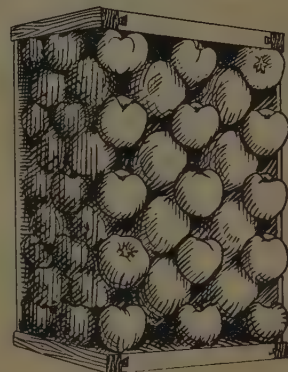
Acclaimed by Growers and Exporters  
to be the Ideal Case



SECTIONAL DRAWING, SHOWING  
DOVETAIL CONSTRUCTION OF  
"GERRARD" END



NAILING AGAINST  
THE GRAIN



Some of the Main Features of the Gerrard Patent Box.

- 1—Owing to the cleat on the end being let in against the grain the board cannot warp, twist or split.
- 2—For the same reason the ends are stronger than one piece natural timber.
- 3—The number of pieces forming the ends can therefore be increased without in any way impairing the strength of the boards.
- 4—With the Gerrard ends you nail against the grain. Because of the cleat let in against the grain a Gerrard box has not only the top and bottom nailed on against the grain but the sides also. Nails cannot be drawn out, and the process of nailing actually still further strengthens the already strong end by nailing the cleats on to the boards forming the end.

- 5—Owing to the enormous strength of the ends they can always be reduced in thickness, thus giving a lighter box, which is very important where freight is charged by weight.
- 6—The Gerrard end will take a 3-in. nail without splitting.
- 7—The Gerrard end is undoubtedly stronger and superior in every way to the ordinary case, and has been proved a commercial success in shipping fruit to various parts of the world.
- 8—The saving to the growers by using the Gerrard Patent end is enormous, because when receiving their boxes in shook form the risk of waste from split ends is entirely eliminated.

WRITE FOR FURTHER PARTICULARS TO THE SOLE AUSTRALIAN AGENTS:—

### Wooden Containers & General Agencies Pty. Ltd.

A.P.A. Buildings, 379 Collins St., Melbourne, C.1., Victoria.

It can be safely assumed that the Board would not concern itself with local marketing, except to determine from time to time, and especially during periods of heavy production, what grades would be permitted to be marketed, and what would have to be diverted to factory and cider use.

I have only briefly touched upon some of the problems that confront our industry—problems that must be faced and solved now if our industry, whether export or domestic, is to be saved from collapse and ruin, and I would urge all Apple and Pear growers' associations throughout the Commonwealth to immediately petition to the Hon. the Minister for Trade and Commerce to convene, without delay, an interstate conference of growers to determine these questions.

A. E. HERRING,  
Chairman Management Committee,  
Packing House Section,  
The Batlow Packing House and Cool Stores  
Rural Co-Operative Society Limited.

Batlow, N.S.W., 16/8/33.

### RE VEGETATIVELY PROPAGATED ROOTSTOCKS FROM EAST MALLING.

(To the Editor, "Fruit World.")

Sir,—Overseas nurserymen have, during the past few years, come to realise the possibilities in the use of vegetatively propagated stocks, and that a wide range of vigor, depth of rooting and early cropping capacity can be obtained by their usage. Unfortunately, overseas nurserymen's experience of such stocks has been confined largely to Northern Spy, though occasionally clonal races of Plum and Cherry stocks are in use. Overseas nurserymen have begun to apply to East Malling for experimental consignments of these various rootstocks, but unfortunately these applications frequently arrive either when all the material has been allotted for home producers or at an inconvenient season of the year for shipping.

Naturally we are interested to see these stocks tried out under conditions so different from our own, and we should like to meet this growing overseas demand more effectively. I am therefore seeking the hospitality of your paper to bring to the notice of nurserymen our methods of distribution, etc.

It should perhaps be emphasised that these rootstocks are no more immune to woolly aphid than the very variable seedling stocks which I found in so many areas were supplementing the immune Spy—a stock of by no means universally satisfactory performance.

The prices of the various rootstocks are fixed at a commercial figure each year after discussion with the Horticultural Trades' Association of this country. Both members of the above Association and members of our own Society are invited to send in applications for these rootstocks at latest by the middle of October, after which they are allotted pro rata according to the available crop. Last year we distributed approximately 150,000 stocks by this method and we received applications for three or four times that amount. However, we wish to see some of these stocks tried out overseas and we always hold back as long as possible, a certain number of one-year transplanted stocks which travel long distances very much better than stocks straight off the stool beds. Applications for such material should reach us by October 15 if in any way possible.

We can usually start dispatching material towards the end of November and can go on up to, say, the middle of March, to suit the conditions of the importing country. We have now sent consignments successfully to most parts of the world and arranged for our shipments to be placed in cold store.

If any of your fruit tree raisers want experimental consignments and have the approval of their respective Departments of Agriculture and the necessary permit we shall be only too glad to co-operate in any way we can.

We should propose to deposit details of the varieties available, and prices, with yourself to enable those interested to have this information quickly, if you would be so good as to retain these details pending enquiries.

Your faithfully,

RONALD G. HATTON, Director.

E. Malling Research Station, E. Malling, Kent, Eng.

### Selected and Vegetatively Raised Rootstocks for Deciduous Fruits for Distribution.

These are well rooted stocks 7 to 12 mm. in diameter, fit to bud or "stool" the season following planting.

#### Apple Stocks—

Class I.—Commercial varieties, true to name. (Prices per 100 and per 1,000 quoted in brackets.) Group A.: Very dwarfing. Jaune de Metz. No. IX. (20/-, 160/-). Group B.: Semi-dwarfing. Doucin. No. II. (15/-, 130/-). Group C.: Vigorous. No. 1. Broadleaved English. No. I. (14/-, 120/-).

Class II.—New varieties raised or introduced to notice by the Research Station. Group D.: Very vigorous. No. XII. (14/-, 115/-). No. XV. (12/-, 95/-). No. XVI. (14/-, 115/-). Crab C. (14/-, 115/-).

Quince Stocks for Pears.—Angers, Type A. Recommended for general use (12/-, 100/-). Type C. Which induces very early fruiting (15/-, 120/-).

Cherry Stocks.—New selected varieties of layered Mazzard (*P. avium*) (15/-, 120/-).

Plum Stocks.—Very vigorous. Myroblan B. (*P. cerasifera*). Compatible with all Plums, but not suitable for Peaches (14/-, 110/-). Black Damas C.: Compatible with all Plums and Peaches (18/-, 150/-). Brompton: Compatible with all Plums and Peaches (25/-, 220/-). Moderately vigorous.—Pershore: Quick to crop. Compatible with all Plums (26/-, 230/-). Common Mussel: Compatible with all Plum and Peaches (25/-, 220/-).

Packing Charges.—A charge of approximately 10/- per thousand stocks is made to cover cost of packing.

Transit.—It is strongly recommended that all shipping arrangements should be left in the hands of our Secretary.

Our shipping agents are:—The British and Foreign Maritime Agencies Ltd., 118 Fenchurch-street, London, E.C.3.

East Malling Research Station, East Malling, Kent, Eng.

### IMPERIAL FRUIT SHOW.

It is hoped that a good representation of Australian dried and canned fruit will be forthcoming at the Imperial Fruit Show, Bristol, England, from October 27 to November 4 next. This show provides an excellent opportunity for exporters to demonstrate their produce. Reports from the Director of Australian Trade Publicity in London (Mr. A. E. Hyland) indicate that Australian dried fruits this season were of very high quality and should receive favorable mention if exhibited at the show. All particulars regarding this show can be obtained from the Department of Commerce, 419 Collins-street, Melbourne.



ARE YOU

GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was **THE "MONKEY" GRUBBER.**

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

**REMEMBER FOR YOUR GRUBBING THERE'S ONLY**

H. H. HINDS,  
Kent Street, Sydney.

A. G. WEBSTER & SONS  
Hobart and Launceston.



A. ROBINSON,  
821 Ann St., Brisbane.

Leading Stores and  
Merchants, South and  
West Australia.

**TREWHELLA BROS. Pty. Ltd. Trentham, Vic.**

## MASSEY HARRIS

### Orchard and Vineyard Implements

#### The Line Includes:—

PLOUGHS. Single and Double Furrow  
ORCHARD DISC HARROWS  
DRAG HARROWS  
GRAPE and BERRY HOES  
SPRING TOOTH HARROWS  
STRAWBERRY HARROWS  
SCUFFLERS and ONE-HORSE HOES  
WEEDING ATTACHMENTS  
FERTILISER DISTRIBUTORS  
TYNE CULTIVATORS. Low Wheel  
ENGINES  
CHAFFCUTTERS  
SAW BENCHES  
CHAIN AND PULLEY YOKES  
TRUCKS

#### Featuring the :

#### Massey-Harris 2-Furrow NATIONAL

#### VINEYARD PLOUGH

Specially adapted for Vineyard and Orchard work.

Land wheel can be used inside frame for ploughing

close up to trees and vines. Handles and levers are low.  
Cuts furrows 8½ in. to 10 in. wide and from 3 to 7 inches deep.



#### MASSEY-HARRIS

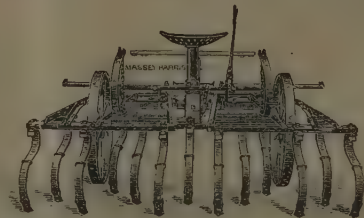
#### Orchard Cultivator

Has 9 oil-tempered tynes, or with extension and 13 tynes as illustrated.

Supplied with pole and swings or forecarriage.

Heavy pressure can be placed upon the sections by means of C-springs.

One lever raises and lowers both sections.



#### Melbourne Royal Show Visitors

Do not fail to inspect the Complete Line of Massey Harris Orchard & Vineyard Implements on the Massey Harris Stand, Plummer Avenue, Showgrounds

## MASSEY HARRIS Farm Machinery

Distributed from—658 BOURKE STREET WEST, MELBOURNE.

(H. V. McKay, Massey-Harris Pty. Ltd.)

## APPLE AND PEAR EXPORT FROM VICTORIA.

IN THE 1933 EXPORT season, according to figures supplied by Mr. J. M. Ward, Superintendent of Horticulture, Victoria shipped a record quantity of 1,430,220 cases of Apples, 390,532 packages Pears, and 3,624 half cases Plums to the United Kingdom and Europe, plus 112,802 cases of fresh fruit to Canada, New Zealand and the East, making a total of 1,937,617 packages. The previous record was 1,074,550 cases in 1930. and included 889,332 cases of Apples and 153,455 cases Pears.

In the 1933 season, 86 varieties of Apples and 48 varieties of Pears were exported. These should be substantially reduced. Of the Apples shipped, 512,081 cases were sent in dump cases and 918,135 cases in the standard Canadian softwood cases. Of the 390,532 cases of Pears exported, 82,118 were sent in standard cases.

In 1932, 1,900 long bushel cases of Pears were shipped to Canada, the fruit arriving in excellent condition. This year 16,084 cases were sent to Canada, including 10,776 in standard cases. Growers suffered losses where softwood cases were not wired. Bruising occurred when fruit was packed too high. Examination of the fruit revealed that many growers, even in the old-established districts, were not conforming to the grading regulations.

During the 1933 season, 36,361 cases of Apples and 5,983 cases of Pears were rejected, the principal causes being codlin moth and black spot (7,380 cases), bitter pit (6,738), inferior sizing (6,842), inferior packing (4,727), San Jose scale (2,378), excess spray and inferior fruit (3,872), other rejections were on account of over-ripeness, inferior cases, water core and glassiness, incorrect marking under the Commerce Act, bruising and breakages on rail and by stevedores; 269 cases of Pears were rejected for not being pre-cooled.

## NEW ORCHARD PLOUGH.

Elsewhere in this issue is featured a new plough which has not been advertised previously in this Journal. This is made by the Gibbins Farm Implement Company at its factory at Footscray, Victoria. The Gibbins Farm Implement Company have been before the farming community for just on 40 years, and are one of the oldest plough builders in Australia.

This company has had a phenomenal run with its two disc reversible ploughs, and during the last few years 2,000 or more of these have been placed throughout the Commonwealth.

This plough is now fitted with an orchard attachment which enables the implement to be worked up close to the trees. This attachment can be fitted to the Gibbins Reversible two-disc plough in the matter of a few minutes, and the plough can be used for ploughing on or away from the trees.

The disc plough is coming into its own with the orchardists, and is regarded as being an ideal implement for ploughing in any kind of rubbish. The Gibbins is an excellent implement for turning in couch and paspalum, because the discs are adjustable both as to breast and undercut. The furrows can be increased from 6in. to 10in., simply by placing the reversing lever in the required notch on the rack.

An outstanding feature is the patent automatic anti-side draught control, which relieves the horses of the strain of countering side draught and neck weight. In the past, the orchardists using a pole implement have had a deep rooted objection to this particular class of plough, on account of the side draught and weight on the

horses' necks. These objectionable features have been got over by fitting a new system of pull to the Gibbins plough, which entirely eliminates all side draught and neck weight.

## APPLE AND PEAR EXPORT.

## Reduction of Varieties Sought.

At the August meeting of the Executive of the Victorian Fruit Marketing Association, it was decided to recommend that the list of 86 varieties of Apples and 48 varieties Pears exported last season be reduced to the following:—

**Apples.**—Alfriston, Ben Davis, Cleopatra, Cox's Orange Pippin, Crofton, Delicious, Democrat, Dougherty, Duke of Clarence, Dunn's, Eagle's Seedling, Esopus Spitzenberg, Granny Smith, Gravenstein, Jonathan, King David, King Cole, London Pippin, McIntosh's Red, Newtown Pippin, Pioneer, Ribston Pippin, Rymer, Rokewood, Rome Beauty, Red Rome, Reinette du Canada, Shoreland Queen, Statesman, Schroeder, Sturmer Pippin, Stone Pippin, Stewart's Seedling, Stayman, Winesap, Willie Sharp, Yates, Yapeen Seedling, and Cleo. Seedling. Of these, Duke of Clarence, King Cole, Pioneer, and Shoreland Queen are listed as doubtful.

**Pears.**—Beurre d'Anjou, Beurre Bosc, Beurre Hardy, Doyenne Boussoch, Doyenne du Comice, Glou Morceau, Howells, Josephine de Malines, Lawrence, Lepin, Madam Cole, Marie Louise, Packham's Triumph, Thiele's Seedling, Winter Cole, Winter Nelis, and Williams Bon Chretien. In addition, Beurre Clairgeau, Beurre Diel, Broom Park, Keiffer, Passons de Portugal, Vicar of Winkfield, and Winter Bartlett are listed as doubtful.

**"RED ROSE" Nicotine Sulphate****40 Per Cent.**

## Testing

50 per cent. in the form of Nicotine Sulphate,

## AND GUARANTEED

40 per cent. PURE NICOTINE.

Indispensable to the Orchardist.

Invaluable to the Poultryman.

Full Directions Given on Each Tin.

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and INSIST upon

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Get That 100 Per Cent. Kill

**David T. Boyd & Co. Ltd.**

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Cable Address: "DIAPHONICS," London.

Agents for Victoria: D. & W. Chandler Ltd.,  
120 Johnston Street, Fitzroy, N.6, Victoria.

Agents for Adelaide (South Australia): Silbert,  
Sharp & Bishop Ltd. Rundle St. East, Adelaide.  
(Enquiries invited for Territorial Sole Agents.)



## Export of Passion Fruit.

### Successful Experimental Consignment.

By the s.s. "Comorin" on July 18 last, Mr. W. J. Craig, of Buln Buln, Vic., sent an experimental shipment of Passionfruit to London. The fruit was carried at a temperature of 40 degrees. On the same day two half-cases were placed in the Victorian Government's cool store at a temperature of 35 degrees. The fruit in each case had been dipped in a wax solution. The fruit arrived in London on August 28, and on that date the two cases placed in the Melbourne cool store were taken out. It opened up in excellent condition outwardly, but it was found that through the low temperature, the flavor was affected. Another case had been stored in ordinary temperature. The flavor was retained, and the solution had prevented the skin from withering. The fruit on the "Comorin" was not carried in the hold, but in the ship's pantry. The wax solution gave the fruit rather an unsightly appearance, but the colored wax appeared to be most effective.

Passionfruit has been sent to London for some years, but its condition on arrival has varied. It usually is sent in cold storage, and it is thought that better results would be obtained if it were carried 'tween decks.

Mr. Basil Krone, Victorian fruit packing expert, said that Passionfruit is a tropical product and would not stand low temperatures. It should be kept at 50 degrees and should not be exported as deck cargo. Results of the experimental shipment by the "Comorin" are not yet known, but a valuable lesson learned from the experiment is that by applying the solution patented by Mr. Craig, the fruit can be landed in London bearing the same appearance as when picked from the vine, providing it is

shipped at the right temperature. Next year it is Mr. Craig's intention to continue the experiment, using colored wax and sending it as deck cargo. The fruit will be selected from pruned vines as the fruit is of better quality than from unpruned vines. The stalks should be closely clipped from the fruit. Only hard and firm fruit should be selected, and the half dump cases should be lined with wood wool.

### EMPIRE MARKETING BOARD.

#### To be Discontinued on September 30.

The British Dominions Offices officially announces that the Empire Marketing Board will be discontinued after September 30. However, certain of the economic and statistical services will be continued, including periodical market intelligence notes and world surveys of production and trade. Such will be financed as part of the work of the Imperial Economic Committee. Consideration is being given as to what research activities should be conducted in future on a co-operative basis.

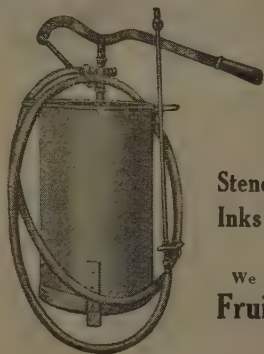
\* \* \* \* \*

The London "Times" has published an editorial stating there is not sufficient reason to justify the abolition of the Empire Marketing Board.

### IMPORTANCE OF ORCHARD WINDBREAKS.

#### Pinus insignis Recommended.

WHERE ORCHARDS ARE EXPOSED to strong winds, the advantages derived from windbreaks are not fully realised. Losses from windfalls are very great in orchards exposed to strong winds, and the general health of the trees is affected. The Pinus insignis fulfils the requirements better than any other tree as a shelter belt (states the N.S.W. Dept. of Agriculture). The object of a windbreak is not absolutely to break the wind, but to sufficiently slow down the speed of the wind so as to render it harmless. The trees of which it is formed shall not be subject to an attack by scale or other pests to which the fruit trees are subject. The windbreak should not be planted too close to the orchard. A distance of 30 feet or more is recommended. If sufficient land is available, a double row of trees should be planted. Those in the second row should be planted opposite the centres of the spaces in the first. The rows should be 10 to 15 feet apart. If an open drain 5 to 6 feet from the windbreak is made the roots are prevented from taking the plant food and moisture from the orchard trees.



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Manufacturers in the  
British Empire of

## RUBBER STAMPS

Stencils, Marking Devices,  
Inks & Acme Stamp Pads.

We make a Big Range of Special  
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We also Manufacture and Supply  
Spraying Machines  
for All Purposes.

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PRUNES, QUINCES  
SMALL FRUITS  
ORANGES and  
LEMONS  
Etc., Etc.

**C. J. GOODMAN,** PICNIC POINT NURSERIES  
BAIRNSDALE, VICTORIA

## Northern Spy Stock.

Mr. F. Kennedy, an experienced fruitgrower at Pakenham, Victoria, is convinced after extensively studying the Northern Spy stock for over 17 years, that it is not the most suitable for Apple trees. Considerable attention was roused recently when Mr. Kennedy published his experiences in the "Fruit World," in which he referred to the "pseudo-roots" connected with the growth of the Northern Spy. These pseudo-roots are stated to be really parasitic. They formed a jelly at least twice a year and the flow of the sap in the tree drew upon this jelly-like substance which killed the cambium, caused die-back, general ill-health to the tree, while the tree not infrequently succumbed. Mr. Kennedy states that where the causes of the trees dying had been attributed to die-back, borer, bad drainage and other causes, the real cause was that of the absorption of the poison which was exuded from the Northern Spy root. Mr. Kennedy, after isolating the poison, extracted the sap from the jelly-like parasitic growth, injected same into spurs and brought about their death.

\* \* \* \* \*

Since the foregoing was published, Mr. Kennedy has continued his researches. He is confident that trees have been weakened through using the Northern Spy stock, thus inducing susceptibility to black spot, bitter pit and other diseases. He believes it would be better to use the Siberian Crab stock or selected seedlings. If using seedlings, the desired variety could be budded thereon, or, better still, the tree would be worked by using a scion from a tree of the desired variety.

Certainly with regard to early varieties there was serious disparity between the sap movement of the stock portion of the tree and the budded portion. With Jonathans, for example, the trees were frequently in leaf, thus drawing on the sap from the stock before the roots of the Northern Spy on which the Jonathan had been worked were active.

It was contended by some growers that the Northern Spy stock was suitable for some varieties, but he thought everyone would admit that the stock was not suitable for all varieties. It was obvious that the sap movement between the top portion of the tree and the roots should be simultaneous.

Mr. Kennedy states he has been interested to read of the activities of the East Malling Research Station and of the views of Mr. R. G. Hatton, with which he was in accord.

Much was heard these days with regard to bud selection. While this was important, he was sure that the question of stocks was still more important, being the fundamental matter with relation to the tree itself.

## MASSEY HARRIS FARM MACHINERY.

At the Massey Harris stand at this year's Royal Show, Melbourne, orchardists and vigneroners will find much to interest them in all the latest improved implements for orchard use. Massey Harris lines are widely and favorably known.

Tobacco growers, also, are being specially catered for; such will be enabled to examine the improved No. 8 tobacco cultivator with hoeing attachment and trailer wheels.

The new No. 18 disc harrow will appeal to fruitgrowers. Always a favorite, this sturdy little implement has again been improved by a new low pull. A full range of orchard ploughs and spring tyne cultivators is again a feature of the Massey Harris exhibit.

## THRIPS INVESTIGATION.

### Interesting Progress Report.

The Council for Scientific and Industrial Research has published in their current journal, a paper by Mr. J. W. Evans and the Waite Agricultural Research Institute, University of Adelaide, giving results of investigations into the thrips problem. The work has been placed under the supervision of Dr. J. Davidson, of the Waite Institute, and is sponsored by the Research Council, State Departments of Agriculture, and the Thrips Investigation League. Funds are also collected from growers and others interested in the investigation.

Mr. Evans states that the records enable one to correlate fluctuations in thrips populations with meteorological conditions. It is evident that the important factors regulating their numbers and the occurrence of plague infestations are the weather conditions prior to and during an infestation. The control exerted by parasites or predators appears to be of little account. That the meteorological conditions responsible for outbreaks are not small local departures from the normal, but climatic variations on a big scale, is evident from facts that outbreaks occur at the same time over immense areas of Eastern and Western Australia. In these areas, the outbreaks may vary in intensity in different places, due to such factors as elevation, hence greater rainfall, or to a profusion or lack of breeding sites.

It is the opinion of Mr. Evans that the numbers of individuals comprising the first spring generation determine the possibilities of a subsequent infestation.

The numbers present in this generation are dependent especially on the meteorological conditions during the preceding four months.

\* \* \* \* \*

The annual meeting of the Thrips Investigation League will be held on Tuesday, September 26, at the Board Room, Commercial Travellers' Association, Melbourne, at 4 p.m.

Funds are still needed to carry on the investigational programme. This matter is favorably commended to all connected with the industry. Donations should be sent to the Secretary, Thrips Investigation League, Box 1944 G.P.O., Melbourne.

## BROADCASTING.

Wireless talks will be delivered by officers of the Victorian Department of Agriculture as follows:—October 17: "Summer Pruning and Spraying of Vines," Mr. F. de Castella, Viticulturist; November 14: "Orchard Irrigation," Mr. F. M. Read, M.Agr.Sc., Senior Horticultural Research Officer; November 28: "Conserves, Beverages, and Sweet: from Strawberries," Miss Knight, Fruit Preserving Expert; December 12: "Summer Treatment of Orchard Insects," Mr. K. M. Ward, B.Agr.Sc., Assistant Entomologist; December 19: "Fruit Crop Prospects," Mr. J. M. Ward, Superintendent of Horticulture.

These talks will be delivered from 3AR Melbourne, from 6.15 p.m. to 6.30 p.m.

Broadcast talks will be delivered from Station 3AR, Melbourne, at 6.15 p.m. to 6.30 p.m., as follows:—

September 19—"Diseases in the Home Garden," Mr. D. B. Adam, B.Agr.Sc., Plant Pathologist. September 26—"Pruning of Citrus Trees," Mr. J. L. Provan, B.Agr.Sc., Horticultural Research Officer.



## W.A.'s PRIZE-WINNING ORCHARD.

## Heavy Dressings of Fertilisers Bring Good Results.

**N**ESTLING in one of those picturesque valleys of the Darling Ranges, some 30 miles from Perth, is "Rokewood," the property of Mr. George Simpson, Karragullen, W. Aust. Exhibits of Apples from this—probably the most widely known and most discussed Apple orchard in Australia—have been awarded more prizes at the Imperial Fruit Show, London, over the last three years, than all the other exhibits from Australia put together.

It will be of interest and benefit to other Apple-growers to have a description of Mr. Simpson's methods. The orchard was initiated by Messrs. Smailes and Laverack, when 9 acres of "Rokewood" Apples were planted and from which the property was later named. In 1916, Mr. Simpson purchased it and extended the area of Apples of mixed varieties, to its present dimensions of 21 acres.

In 1931, "Rokewood" was represented at the Imperial Fruit Show by three entries, and caught the judge's eye to the extent of two first prizes, one second and a gold medal with which was awarded the championship cup.

occur in the average orchard. A considerable saving of labor in propping and hand working thereby is made.

Summer pruning begins in January, when thinning also takes place. In this month also a spraying with white oil is accorded. In June, red oil spraying is carried out, to be followed in September by the use of "C.S.M.L." lime-sulphur spray, when the buds are in the pink stage. The owner of "Rokewood" is most eulogistic of the results from the use of this material, and points out with pride always the satiny bloom and blemish-free appearance of his fruit as he conducts visitors through the orchard, when the crop is hanging.

The question of fertilising, naturally, is one of extreme importance, as he reasons that, if the trees are to carry the crop, as they do without the fluctuation so noticeable in most orchards, they must be generously treated as to manure, and that the plant foods so applied must be properly balanced. "C.S.M.L." Special Mixture "K" is the fertiliser to which Mr. Simpson pins his faith, and this contains 8.3 per cent. nitrogen, 10.04 per cent. potash, and 8.40 per cent. water soluble phosphoric acid, which, from his experience, he declares the ideal mixture. This mixture is practically identical with the 2:2:1 mix-

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and  
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Covent Garden Market, LONDON

Specialists in Australian Fruit.

Solely consignments of Apples, Pears,  
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Our record of over 30 years' standing  
in the handling of Australian fruit,  
with satisfactory results, is a recom-  
mendation for growers to ship their  
fruit to our house.

Representatives—

International Fruit & Mercantile  
Company Ltd., Melb., Vic., Australia;  
and A. J. Walshe & Co., Hobart,  
Tasmania.

Following these successes, Mr. Simpson, with four entries in 1932, secured three first awards, one second and a special carrying the cup. At the recent (1933) show, "Rokewood" added further lustre to its already enviable record by capturing, with four entries, two first prizes, a second, and special, including the cup, which has been awarded for the best Apple exhibit irrespective of variety. The cup, having been won three times by Mr. Simpson, now becomes his property.

The various phases in correct fruit tree treatment are carried out with the most meticulous care and thoroughness, as are necessary to secure such results. Probably the most discussed item in the orchard operations is the system of "elbow" pruning followed by Mr. Simpson, which at the beginning was declared ruinous, but now is described by critics as "rather unorthodox."

Pruning begins as soon as the leaves have fallen from the trees and is finished by "bud-burst." Under the "elbow" system, a tremendously strong, shapely tree is formed, which necessitates no propping to carry the crop, and the implements are worked quite close to the butts of the trees without any injury resulting, as would certainly

ture recommended by the Department of Horticulture in Victoria. 14 cwt. per acre of this tree-building and fruit-producing fertiliser are ploughed under, in conjunction with a green crop of oats and peas in August, the cover crop providing tons per acre of soil conditioning humus when rotted, as this growth stands 4 to 5 ft. high when turned in.

It is interesting to record that the very first lot of mixture "K" to leave Cuming Smith-Mount Lyell works at Bassendean, when it was listed three years ago, was taken delivery of by Mr. Simpson.

A visit to this orchard demonstrates quite clearly that to win Imperial Fruit Show awards, means unremitting care and attention throughout the twelve months, to the big things as well as the lesser intricacies of orchard management.

"Red Rose" Nicotine Sulphate will be found very useful for the orchardist and poultry farmer. Victorian agents are Messrs. D. & W. Chandler Ltd., 120 Johnston-street, Fitzroy, and the agents for South Australia, Messrs. Silbert, Sharp & Bishop Ltd., Rundle-street east, Adelaide.

# "VALLO"

## COPPER SULPHATE "NEIGE" CRYSTALS

Dissolves Like Sugar.

Take an ordinary tea cup, fill it up with water, empty a sample into it, and by simply stirring around a few times you have a perfect Bluestone solution. In using a white tea cup for the test you can see that every particle dissolves.

1. Saves waste, time and labor.
2. You are not dependent on weather conditions.
3. "Vallo" Neige dissolves so easily you can put out your Spray at a moment's notice.
4. Analysis guaranteed:  
99 per cent. Copper Sulphate.
5. Supplies obtainable from all Stores.
6. Packed in cases containing 1 cwt.
7. On application a sample will be posted immediately.

Also

Ordinary Crystals and Finely Ground

Manufacturers:

**Victor Leggo & Farmers  
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**222 Queen St., Melbourne**

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Choice Orchard and Grazing Properties

**"Binnak Orchard"**

AREA.—About 100 acres.

SITUATED.—Near Moorooduc, about 30 miles from Melbourne, and within easy distance of Frankston, Mornington and Somerville; splendid road.

Orchard comprises about 58 acres of export and interstate varieties of apples and pears, mostly just coming into full bearing condition, planted in the following varieties:—

APPLES.—2,000 Jonathans, 1,000 Romes, 500 Alfriston, 330 Five Crown, 250 Granny Smith, 175 Statesman, 100 Stewart's Seedling, 120 Duke of Clarence, 70 Dunns.

PEARS.—420 Packham's Triumph, 200 Keiffer.

About 25 acres are sown down with rye grass and subterranean clover, well suited for fattening and dairying, and the remainder of land is good grazing country, partially cleared and with a good supply of firewood.

IMPROVEMENTS.—New 5-roomed W.B. house with bath-room, pantry, porch and verandah. Out-buildings consist of garage, tool shed, large packing shed, stables, implement shed, fowl house, all in splendid order.

Good water supply, windmill, 2 water holes and 4 good tanks—a never failing supply.

"Binnak" is one of the best and most up-to-date properties in this favored locality; the trees are carefully selected and expertly tended, and the whole orchard and appointments well kept and in splendid order.

— ALSO —

**Choice Grazing or Dairying Property**

About 223 acres (immediately joining "Binnak") of exceptionally rich grazing land; excepting a small portion carrying valuable timber for firewood, the whole area is cleared and laid down in subterranean clover and rye grass, and carrying a wonderful body of feed. Well fenced and subdivided into numerous paddocks. Well and permanently watered, capable of fattening all classes of sheep or cattle, or would make an ideal Dairy Farm.

Annual rainfall about 30 inches—droughts practically unknown.

The owner of these two properties is a genuine seller, and is prepared to sell both as a whole, or separately, at reasonable values.

Inspection is invited, and further particulars will be supplied on arrangements for inspection made on application to the Agents:—

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Of the Latest Improved Design.

Many features far in advance of any yet on the market—Handling costs greatly reduced—No fire risks—Economy in Fuel—Small space required.

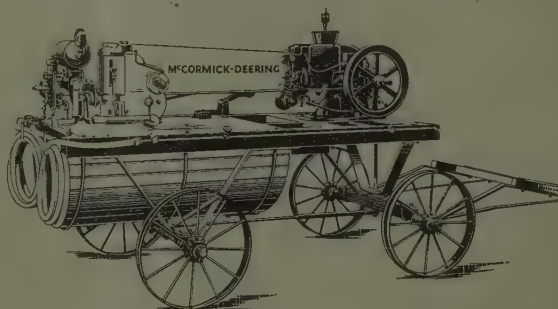
"LIGHTNING" RUBBER ROLLERS ARE DIFFERENT—THEY ARE MADE OF SOFT THICK RUBBER, VULCANISED ON TO MACHINED STEEL SPINDLES AND EXCLUSIVE TO "LIGHTNING"—EVERLASTING.

A grader with an independent section grading bar will be supplied if a cheap machine is required.



# The New McCormick-Deering Power Sprayer

Here is the new McCormick-Deering Power Sprayer—the power sprayer that will measure up in every particular to all your ideas of a practical, efficient power sprayer. It has everything you want—a sturdy, economical engine to provide dependable, low-cost power, a well-designed, high-pressure pump to maintain that steady, consistent pressure so necessary for successful spraying, a well-built truck, a vat of ample capacity and many other valuable features. The new McCormick-Deering Power Sprayer is made in two-wheel and four-wheel types and can be supplied with either a  $1\frac{1}{2}$  or 3 h.p. engine. Ask the McCormick-Deering local agent to tell you about the McCormick-Deering line of orchard equipment, or write us for particulars.



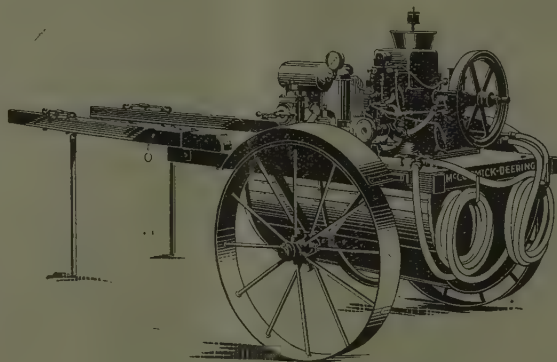
The new McCormick-Deering Four-Wheel Power Sprayer.

## Four-Wheel Outfit

The new McCormick-Deering Four-Wheel Power Sprayer consists of a McCormick-Deering kerosene engine and a duplex high-pressure pump mounted on a sturdy, four-wheel truck. The engine has an enclosed crankcase, removable cylinder, high-tension magneto, throttle governor and gravity-feed mixer, while the pump, which has porcelain-lined cylinders, is so designed that its working parts are totally enclosed and operate in a bath of oil. The vat has a capacity of 75 gallons. Regular equipment includes two lengths of  $\frac{1}{2}$ -inch discharge hose, strainer, directors, nozzles and set of tools.

## Two-Wheel Outfit

The new McCormick-Deering Two-Wheel Power Sprayer has the advantage of being compact and easy to manoeuvre between the trees. Its wheels are wide and sturdy, its vat is underslung and it has a particularly low centre of gravity which makes it an ideal outfit for use in hilly country. It is equipped with a 100-gallon vat and a gear-driven duplex high-pressure, self-oiling pump operated by an economical McCormick-Deering kerosene engine. Two lengths of  $\frac{1}{2}$ -inch discharge hose, strainer, directors, nozzles and complete set of tools are included as regular equipment.



The new McCormick-Deering Two-Wheel Power Sprayer.

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### VICTORIAN CROP PROSPECTS.

In the latest seasonal report of the Department of Agriculture, Victoria, the following notes are given:—

**Deciduous Fruit.**—There is a very good development of fruit buds in Apple and Pear trees for a crop in the coming season. Spraying for San Jose scale is proceeding in all districts with special activity in the Shepparton district, where nearly 9,000 gallons of winter oils, as well as large quantities of lime-sulphur and tar distillate are being used. Planting is still proceeding. Good general rains have been experienced, and little damage from frost. Peaches are in bloom in the Swan Hill district. Pruning is well advanced in all districts, and should soon be completed.

**Viticulture.**—Dry conditions prevail. For the six months ended June 30, the total rainfall was barely 7 inches (average 10.53). Deep and thorough tillage is advised in preparation for a dry spring. At the Rutherglen Viticultural Station the soil is in excellent order for ploughing and subsoil moister than might be expected under the circumstances. Drier conditions have been experienced in the irrigation areas. The indications of the subsoil auger should now prove useful. Spring frosts are likely to occur in a dry season. Preparations for community smudging would be on sound lines. Preventive swabbing against vine black spot should not be omitted. Though its occurrence was much reduced by the dry autumn, overwintering forms are sufficiently numerous for a disaster should the spring be wet and preventive measures be neglected.

**Citrus.**—Estimates of the crop are being well maintained and there is still much fruit to be harvested. The spring Lemon crop is heavy and unless frosts are experienced, growers would do well to retain, either on the trees or by curing, a large proportion of the spring crop for marketing during the summer months.

Many growers are experiencing difficulty in cleaning red scale from their fruit. Owing to the long, dry autumn, both red and black scales developed abnormally and the infestation was heavier than many growers realised. A useful method that could be employed to remove scale from the fruit is by dipping in a strong boiled starch solution and allowing to dry. The starch and scale can then be easily removed.

### SOUTHERN FRUITGROWERS' ASSOCIATION.

An Executive meeting was held at Box Hill on August 3, 1933, Mr. W. A. Thiele presiding. Messrs. L. Pepperell, G. Fankhauser, V. Lawford, F. Pyke were also present. An apology was received from Mr. O. White. Visitors included Messrs. J. J. Tully, E. I. Lawford, J. M. Ward and Mr. Russell. Letter was received from the Doncaster Association re the importation of Apples into Australia, fear being expressed that there was a danger of fireblight being introduced. It was resolved "that Dr. Cumpston be written to explaining the position, also asking that every precaution be taken to safeguard the fruit industry." Correspondence from Mr. J. Ward, Superintendent of Horticulture, was received, dealing with the return of 88 cases of Apples from Brisbane, stating that the fruit was contaminated with lead arsenate. Mr. Ward stated what had been done to counteract the drastic action taken by the Queensland Department. The Premier and Minister for Agriculture, also Mr. Ward and Mr. Everard, had moved in the matter. It was resolved "that the

action of Mr. Ward be endorsed and a letter of appreciation be forwarded to the Minister for Agriculture for prompt action taken." A circular from Apple Publicity Campaign was received, giving a satisfactory progress report.

It was decided to send a letter of sympathy to the widow and family of the late Mr. W. Muir, who had recently passed away.

The President stated at the next meeting he would report on a scheme to increase the income of the Association.

### FIELD DAY AT PAKENHAM.

Under the auspices of the Victorian Fruit Marketing Association and the Gippsland Fruit Marketing Association, a field day was held at Mr. J. J. Ahern's orchard, Pakenham, on August 15. There was an attendance of over 150 growers from local districts, also from Drouin, Warragul, Bairnsdale, Ringwood, Harcourt, and the Mornington Peninsula. Much enthusiasm was shown and appreciation was expressed to Mr. Ahern.

The trees were pruned by Messrs. J. W. Bailey, T. Fuller, G. Brown, H. Leversha, E. Cook, G. Priest, A. Board, J. Murphy, F. Kennedy, L. Fraser and H. Howling. Mr. E. E. Pescott gave a pruning demonstration to members of the Junior Farmers' Club.

A demonstration of the Howard Rotary Hoe created much favorable attention.

In the evening, Mr. E. E. Pescott spoke of the success of the new methods of re-working fruit trees, which appeared to have possibilities of commercial importance. After outlining the valuable research work of the Victorian Department of Agriculture, Mr. Pescott gave an illustrated lantern lecture on orchard pest control.

The meeting agreed to a substantial reduction of the number of varieties of Apples and Pears exported.

Mr. F. R. Mellor gave an appreciated lecture on the freight situation, outlining the work of the Victorian Exporters' Handling Committee, the Victorian Fruit Marketing Association, and the Australian Apple and Pear Export Council. The formation of a Freight Committee of the Apple and Pear Export Council to act in co-operation with the shipping companies would ensure a regulated export trade.

### OFFSET DISC CULTIVATOR SUITABLE FOR ORCHARD AND FARM WORK.

Mr. D. Harvey, orchard implement maker, Box Hill, Vic., advises that the above mentioned implement is particularly adapted for orchard work in that it can be set right over to one side of the tractor. One of the many features of this tractor disc cultivator is the elimination of side draught. The front gang cuts on to the trees and the back gang cuts and turns it back, leaving the ground level and thoroughly worked, but not in a powdered condition. There is nothing projecting above the discs themselves when the cultivator is at work, consequently it can be worked right under low hanging branches without fear of injury to the trees. A patented device regulates the machine to cut an even depth both sides. This cultivator can be set to work directly behind the tractor. A similar machine is also built for horse draught. This is reported to be an excellent orchard disc cultivator: the cut is controlled without leaving the seat of the tractor.



## FIELD DAY AT SOMERVILLE.

Under the auspices of the Victorian Fruit Marketing, a successful field day was held at Mr. J. Byrne's "Binnak" Orchard, Somerville (Mr. G. Tyler, manager), on August 24. Trees were pruned by Messrs. J. W. Bailey, W. P. Hutchinson, P. V. Kerr and J. Unthank. There was a display of ploughs from Mr. D. Harvey, and the Buzacott motor spray pump by Messrs. Cameron, Sutherland and Seward.

In the evening a largely attended meeting was held at the Tyabb Hall, Mr. Stockton presiding. Mr. G. W. Brown, president, V.F.M.A., and a member of the Australian Apple and Pear Export Council, gave details of the negotiations with the A.O.T.A., and the deputation to the Prime Minister regarding freights on fruit. The reduction of 2d. per case in June and 3d. in July was insufficient. It was possible that the reductions of Governmental taxation and harbor dues to shipping companies might reduce fruit freights by 5d. per case. Freight reduction was absolutely essential. The question of better distribution was vital. The several States were agreeable to the formation of a Freight Committee of the Apple and Pear Export Council, which in co-operation with the shipping companies, could decide on a co-ordinated fruit shipping programme without Governmental legislation.

Mr. J. W. Bailey gave details of the work of the Research Committee of the V.F.M.A. Much valuable fundamental work was being conducted in the thrips investigation and he urged growers to liberally assist in conducting the three years' research programme. He favored the Export Control Bill.

## THE "BINNAK" ORCHARD, SOMERVILLE.

FOR TWO YEARS in succession, successful orchardists' Field Days have been conducted at Mr. J. Byrne's "Binnak" Orchard, Somerville, which is under the management of Mr. G. Tyler.

The orchard comprises 58 acres of export and interstate varieties of Apples and Pears for the most part just coming into full bearing. The situation is near Moorooduc, about 30 miles from Melbourne, and is connected by good roads with Frankston, Mornington and Somerville. The soil is a medium loam overlying sweet clay subsoil. In the orchard are planted about 2,000 Jonathan Apple trees, 1,000 Romes, other varieties including Alfriston, L. Pippin, G. Smith, Statesman, Stewarts, Duke of Clarence, Dunns. Pears—Packhams and Keiffer.

Favorable comments have been made by visiting growers regarding the health and vigor of the trees. Varieties have been worked over to those most suited to the district and provision for pollination is complete. Jonathans are fertilised with Duke of Clarence and Dunns, the Packhams Pears with Beurre D'Anjou and Black Achan.

There is an average annual rainfall in this locality of 35 ins. Droughts and harmful frosts are practically unknown.

The orchard manurial programme has been carefully attended to in co-operation with science officers of the Department of Agriculture. Manures have been applied to provide green crops for ploughing under.

For spraying purposes, tanks have been erected on raised platforms, the water being pumped into the tanks from convenient catchment areas. The water for

spraying is filtered by means of a silt trap, thus saving wear and tear on the motor pump engines.

Mr. Tyler has been successful with poultry, particularly with a good strain of Light Sussex. On the orchard is a large packing house complete with a "Lightning" grader and conveniently arranged packing bins. Fruit is sold under the "Binnak" brand. With its new house and well kept garden, garage, tool sheds, stables, implement shed, fowlhouse, etc., this orchard is self contained. Adjoining the orchard is another 50 acre block, about 25 acres of which are sown down with ryegrass and subterranean clover.

\* \* \* \* \*

The Somerville district has come into prominence because of its facilities for grazing and dairying. Immediately adjoining the "Binnak" orchard are 223 acres of valuable grazing land, mostly cleared and sown down with grasses.

## SERVICEABLE SPRAY PUMPS.

Messrs. Cameron, Sutherland and Seward Pty. Ltd., Riverside-avenue, Melbourne, have arranged a comprehensive exhibit of farm and orchard machinery, which will be open for inspection to country visitors during Show Week at the show rooms, which are situated opposite Flinders-street Railway Station, near Queens Bridge. The following will be on view:—Riverside Centrifugal pumps, Buzacott horizontal and vertical engines, hand and power pumps and direct coupled pumping outfits, spray irrigation systems, portable sprayers, and other equipment for the orchard, sheep jetting and fire fighting equipment, hygienic milking machines, Westfalia cream separators.

This company claims to have in the Buzacott Fig. 450 high-pressure spray pump and Buzacott 2 h.p. vertical hopper-cooled engine, units which are ideal for orchard work. Pressure 350 lbs. per square inch. The pump is a single acting twin cylinder machine delivering 5 to 10 gallons per minute according to the speed at which it is driven. The whole of the working parts of the pump run in oil and are totally enclosed. The 2 h.p. totally enclosed Buzacott vertical engine is employed to drive the pump. The firm also has various types of power and hand operated portable orchard outfits. A cheap and complete power unit is the Buzacott Fig. 322s, capacity 3½ gallons per minute, pressure 240 lbs. The company extends a cordial invitation to all readers to call at their show rooms.

## ORCHARD IMPLEMENTS, ETC.

Attention is directed to the announcement elsewhere in this issue by the Lightning Fruit Grader Co. regarding their specialised implements for orchardists. Particular attention has been paid in the manufacture of these implements to the requirements of orchardists and vine-growers, and the complete range of implements includes: Mouldboard ploughs, single, double and three-furrow; disc ploughs, double and three furrow; one-way orchard cultivators; spring tooth cultivators, various sizes; citrus cultivators; harrows, sub-soilers, orchard harness, etc. This firm is also manufacturing a new dehydrator, and particulars of this are contained in their announcement which also contains reference to their complete line of packing house equipment. A photograph of the factory in which the "Lightning" products are produced is also depicted.

## AUSTRALIAN DRIED FRUITS SALES IN GREAT BRITAIN.

The Commonwealth Dried Fruits Export Control Board, in their ninth bulletin relative to the sales of dried fruits in Great Britain, advise that during the fortnight ended August 17, 2,017 tons of Australian dried fruits were placed in the British market; 218 tons of Lexias averaged £37/9/9; 756 tons of Currants £33/0/9, and 833 tons of Sultanas £36/4/10 per ton. The demand for Lexias is pleasing, and reflects a fall in the production of Spanish Valencias. Reports in respect to the coming Smyrna crop indicate a reduction in the tonnage anticipated and greater interest is being taken in Australian Sultanas in London.

In their tenth bulletin, the Commonwealth Dried Fruits Export Control Board advise that during the week ending August 24, 2,177 tons of Australian dried fruits were purchased by British buyers, including 1,334 tons Sultanas, at an average of £36/11/8 per ton, 538 tons Currants at £32/16/8, and 124 tons Lexias at £33/15/- per ton.

A stronger demand is manifested in Sultanas indicating an early opening of the seasonal interest in Australian dried fruits, probably as the result of adverse reports regarding the Mediterranean harvest prospects.

### RECORD PACK OF DRIED FRUITS.

77,525 Tons.

THE consultative committee of the State Dried Fruits Boards, recently issued a report stating that the aggregate pack for the Commonwealth was expected to comprise 16,845 tons of Currants, 53,406 tons of Sultanas, and 7,265 tons of Lexias, making a total of 77,525 tons. The previous record was 72,194 tons in 1930. Last year the crop amounted to 58,441 tons. The result was that 20,000 tons more fruit would have to be disposed of this season than last year.

The Committee urged that there be no additional planting of vines for dried fruit production owing to world over-production of Sultanas.

Export quotas were for Currants 80 per cent., Sultanas 90 per cent., and Lexias 67½ per cent.

## DRIED FRUIT FOR CANADA.

The steamer "Canadian Scottish" sailed in mid-August with 2,000 tons of dried fruits from Victoria and South Australia. This was the largest shipment for the year so far, but the peak period in the export trade to Canada will not be reached until November. Australia's dried fruit exports to Canada last year totalled 14,500 tons, but there are indications that the figure will be exceeded this season.

Two growers and two storekeepers were proceeded against at Griffith, N.S.W., on August 24, for having sold Sultanas not packed, graded and branded in accordance with the regulations under the Dried Fruits Act, 1927. The Counsel for the defendants admitted the facts and argued against the validity of the Act and regulations. Decision was reserved.

### NEW FRUIT CASES.

#### Patent Case End Attracts Attention.

Considerable interest has been created in the fruit industry by the introduction of the Gerrard patent box, the outstanding feature being the specially constructed ends. These ends can be made from two or three pieces dovetailed with a cleat at the sides. Owing to the cleat being let in against the grain the board cannot warp or split. The weakness with many boxes is the sides, because they have to be nailed into the ends with the grain of the ends which results in nails being easily drawn out. With the Gerrard ends the operator nails against the grain. The manufacturers point out that because of the cleat let in against the grain, a Gerrard box has not only the top and bottom nailed on against the grain, but the sides also; moreover, as the nails penetrate through the cleats into the main boards of the ends, it not only gives the sides a more secure hold, but the process of nailing still further strengthens the already strong ends by nailing the cleats on to the boards which form the ends.

Demonstrations in various parts of Victoria have been received with satisfaction. The patent is a world-wide one; 150,000 Gerrard Apple boxes were used in export from South Africa last season and a similar quantity from Tasmania. Scientific tests in South Africa revealed the remarkable strength of this patent box. Further particulars are obtainable from Wooden Containers and General Agencies Pty. Ltd., 379 Collins-street, Melbourne, C.I.

## FRUIT TREES

### ONE GROWER SAYS—

"The trees (750) arrived in excellent order and are of exceptional quality. Our local inspector said they were the best trees he had seen. You will get my order, about same number, for next year."

### QUALITY.

### QUANTITY AVAILABLE.

Catalogs and price lists from—

**John Brunning & Sons**

Somerville Nurseries.

**Somerville - Victoria - Australia**

Established 1866.



Why damage your fruit and waste your time when nailing down apple, pear, citrus and banana crates—when an ADECO LID PRESS costs so little?

Adeco Press for Standard & Dump Cases, 77/6

Adeco Press for Banana Cases - - - 90/-

(F.O.B. Melbourne)

**Gerrard Wire Tying Machines Co.**  
Pty. Ltd.

119-125 Hawke St., West Melb., C.3.

SYDNEY. BRISBANE. ADELAIDE. PERTH. HOBART.

**DETAILED PACKING CHARTS AND GENERAL FRUIT PACKING INFORMATION ARE SUPPLIED FREE ON APPLICATION. "GERRARD SERVICE."**



# Citrus News and Notes.

## COMMONWEALTH CITRUS COMMITTEE.

A meeting of the Commonwealth Citrus Committee was held at Sydney during August. Mr. J. Gunn, director of development, presided. The following delegates attended: Professor W. Y. Young, officer in charge, Citricultural Research Station, Griffith; and Messrs. G. Quinn (S.A.); C. G. Savage and R. J. Benton (N.S.W.); J. M. Ward (Vic.); J. M. Mathew, superintendent of testing, State Rivers and Water Supply Commission, Melbourne; H. Barnes, acting director of fruit culture, Brisbane; V. C. Loban, Commonwealth Development Branch; H. Thomson, Department of Commerce, and C. A. Hulswich, representing Mandarin growers and the Citrus Council; Messrs. F. H. Metters (South Australia), V. C. Williams (Murrumbidgee Area, N.S.W.); J. Heane (Fruitgrowers' Federation of N.S.W.); A. W. Schwennessen (Victoria), and C. Mullany (Victorian Railways Dept.).

Senator McLachlan urged self help in scientific research: £5,000 to £10,000 should be provided by those in the industry: the Federal Government might supplement the funds raised.

The Minister for Commerce (Hon. F. H. Stewart), said that overseas markets for 1,000,000 cases would be needed in the next year or two. England annually imported 25,000,000 bushels of Oranges, and the prospects for Australian export were bright.

In the report of the sub-committee it was advised that State sub-committees representative of the Department of Agriculture and Industry should be formed in the various States for the purpose of assisting the industry and the Federal Citrus Council in conjunction with the Commerce Department and Scientific Council be asked to take up the question of shipping facilities for long distance transport, and endeavor to obtain a more efficient service; that scientific research be proceeded with. The report further advised that the legal position in regard to the control and marketing by States and the Commonwealth be inquired into. The recommendations were adopted.

Mr. A. C. Hulswich, representing the Mandarin growers, referred to the seriousness of the Mandarin situation due to over-production and suggested that 25 per cent. be cut out.

Mr. A. W. Schwennessen, Victoria, said that if 25 per cent. of the Australian Mandarin trees were uprooted it might be necessary to destroy a further 25 per cent. later. The Mandarin industry had gone out in U.S.A. Mandarin growers would not do their case any good by asking for £35,000 compensation.

General J. Heane said that to cut out 25 per cent. or even 50 per cent. of the trees would not influence the price of Mandarins. The industry was finished except for a few favored areas. It was decided to defer consideration of the Mandarin position until the next meeting of the Committee.

Mr. F. H. Metters (S.A.) drew attention to the lack of organised marketing and moved "that as the Committee is of opinion that without effective organisation orderly marketing is impossible, it is greatly concerned at the absence of any strong movement in this direction, and recommends the matter for the urgent consideration of growers."—Carried. A vote of thanks was accorded to Mr. Gunn for the manner in which the Conference was conducted. The next meeting of the Committee will be held in Melbourne.

**Advertising Mandarins.**—Nearly 200,000 Mandarins were distributed free in Sydney in mid-August in an effort to establish a market for the fruit grown in "The Hills" district between Hornsby and Windsor.

## NEW ZEALAND EMBARGO PARTIALLY LIFTED.

**South Australian Oranges and Lemons New Being Despatched.**

New Zealand has partially lifted the embargo on the importation of Australian fruit, having accepted Oranges and Lemons grown in South Australia. The first shipment of South Australian Oranges since the restrictions were 3,000 cases sent to Sydney by the "Westralia" and transhipped to the "Wanganella," which left Sydney on August 25. A further shipment of 5,000 cases will shortly be sent by the s.s. "Wainui."

The Minister for Commerce (Hon. F. H. Stewart) stated he regretted that the N.Z. embargo had been only partially released, however, such fruit as went to New Zealand would relieve the pressure on the Australian markets.

## "PLANT FOR THE PRESERVATION OF FRUIT, VEGETABLES AND THE LIKE."

NOTICE is hereby given that the owner of Australian Patent No. 21677/29, is desirous of disposing of his rights in this invention by way of license or otherwise. Further particulars on application to DAVIES & COLLISON, Patent Attorneys, 483 Collins Street, Melbourne, C.I.

## Fruit Trees of Outstanding Quality

True to name, healthy and well-rooted. Citrus trees in large quantity—  
Budding Wood supplied by the Bud Selection Society of N.S.W.—  
Worked on Lemon, Sweet Orange, and Trifoliata Stock.

CATALOGUE FREE ON APPLICATION.

ESTABLISHED 1901.

**L. P. ROSEN & SON, Fernhill Nurseries**

Pennant Hills Road, CARLINGFORD, New South Wales

## CITRUS NEWS AND NOTES.

Oranges ex. s.s. "Otranto" landed in London on August 9 in a good condition. The quality of the pack was pleasing to the trade, but unfortunately the market was heavily stocked with Brazilian, Californian and Spanish Oranges, and the prices were unsatisfactory. The Oranges realised from 7/- to 11/3 per case, a few selling at 16/-. Mr. J. A. Parkes, Secretary, Federal Citrus Council, stated that costs amounted to 13/- per case before there could be any return to the grower.

The High Commissioner in London cabled stating: "New South Wales Orange pack equal to best arriving here. Condition sound, quality very good. Slightly inferior to South African. Average price, Navels 8/-, S.A. Navels 2 per cent. waste, packing and quality good. Receiving slightly lower prices N.S.W. owing to rougher outward appearance. W.A. quality very good, 3 per cent. waste, prices similar to N.S.W."

The Secretary of the N.S.W. Citrus Packers' Association, Col. E. E. Herrod, expressed pleasure that the fruit arrived in good condition and was appreciated by the British trade.

The s.s. "Chitral" sailed on August 15 with 17,000 cases mostly from N.S.W.: included were 2,500 cases from Victoria which were from Shepparton, Murrabit and Lake Boga.

## SEASONABLE CULTURAL NOTES.

**SEASONABLE CULTURAL HINTS** for September are given by Messrs. C. G. Savage and R. J. Benton, in the N.S.W. Agricultural Gazette as follows:—

**Reworking.**—Citrus trees of unsuitable strain or variety should be cut back severely this month to force out young growth, on which buds may subsequently be placed. Only trees in at least a fairly thrifty condition are suitable for re-working. The age of the trees is of less importance than a satisfactory soil. For instance, thrifty trees twenty years old growing in a deep soil can be more successfully re-worked than trees eight years old in a less favorable environment. Orange trees can readily be worked over to any variety of citrus, whilst Mandarins may be changed to Oranges and probably other citrus varieties also.

**Planting of Citrus Trees.**—September is a very favorable period for planting any refills or extensions. There is little risk of frost, and the earlier trees are now planted the better is their prospect of becoming established before dry hot windy weather is experienced.

The land having previously been well prepared, holes from 18 to 24 inches square and sufficiently deep should be dug to permit of the trees being planted with the bud unions a few inches above ground level. In heavier than normal soils even higher planting is desirable. On receiving trees from the nursery, wash the puddle from the roots and keep them damp until planted. Cut back the tops and remove the leaves from the stems, protecting the latter with some shelter—paper or hessian—to prevent sunburn. Well-grown one-year-old trees are preferable for planting, though two-year-old trees which have been well worn are usually quite satisfactory. There is greater risk of introducing scale pests on two-year-old trees.

## MANURING OF CITRUS TREES.

## A Seasonable Operation.

In the manuring of citrus trees nitrogen appears to be the most important constituent. The following mixture is recommended by the special fruit instructor in citrus growing (N.S.W. Department of Agriculture):—Sulphate of ammonia, 6 cwt.; sulphate of potash, 1½ cwt. Mix together well, and apply ½ lb. of the mixture per tree for each year of the tree's age up to 15 lb.; thus, an eight-year-old tree will receive 6 lb.

As citrus trees are evergreen and more or less active right through the year, they should receive a dressing of the fertiliser twice a year, the first near the end of winter or early spring and the second about three months later. The applications will then be timed so that the plant food will be available at the commencement of the two main growths in the trees.

Every opportunity should be taken to increase the organic content of the soil by the turning in of bush scrapings or similar material. The ploughing in of green manure crops, so valuable in this relation, must not now be delayed.

## MOTOR TRUCKS FOR THE FRUIT INDUSTRY.

With the Melbourne Royal Show at hand it is an excellent opportunity for fruitgrowers to see for themselves the latest developments in the motor truck industry. These vehicles, which have become such a big factor in the marketing of the growers' products, have made such strides in advancement that one would hardly recognise the new trucks, when comparing them with those of a few years ago, particularly where the running costs, etc., are concerned.

A glance round the motor truck showrooms brings forcibly to one's mind the progress that has taken place of recent years in commercial vehicles.

With such a large range (such as utility, speed and various weight trucks) available in about ten to a dozen different makes, growers have a good selection in choosing the particular type and make for purchase.

Price of course is a big consideration. When considering price, another point comes to light—the "trade in" value of the vehicle now in use.

Dealers in used cars are continually on the lookout for used trucks, for which they have an ever-increasing demand, and at the present moment are bringing very good prices in our cities; in fact, one firm informed our representative that good second hand trucks were worth their "weight in gold" as far as they were concerned.

In England there are a number of firms who are devoting their output to commercial trucks, which proves to what extent this means of transport and haulage is being used throughout the world.

Where speed is required, the New Reo, Leyland, Ford, Chevrolet, Dodge, Bedford, and Morris Speed trucks present very favorable propositions to men "whose time is money." These speed trucks are perfected to such an extent that although rated at about 22 to 24 h.p. and developed up to 70 h.p., they can give an excellent mileage to the gallon, so when taking the cost of petrol into consideration the price of haulage is particularly low.

During the past eight months we have seen the prices of petrol reduced step by step from 2/- 1st grade and 1/10 2nd, to the present day prices of 1/7 and 1/5 respectively. These drops have also been recorded in the country towns so it is apparent we are likely to have cheap petrol for some considerable time.



## Apple Export. 8

**Australian Apple Growers Can Supply Long Lines of Quality Fruit Well Packed and Graded.**

**A**PPLGROWERS in Australia realise the importance of growing quality fruit and packing and grading same up to a standard that will meet the requirements of overseas markets. Growers and packers recognise that there is always room for improvements, and they are always working to this end and welcome constructive criticism and advice that will help them in their efforts, but there are many unfair criticisms levelled at the fruitgrowing industry by visitors and officials returning from oversea trips who have never taken the trouble to ascertain the manner in which export fruit is handled and prepared for shipment.

A trip through the fruitgrowing districts during the Apple export season amply demonstrates the genuine efforts which are being made by growers to produce quality fruit and grade and pack same to the highest possible standard. Up-to-date packing sheds are operating in all the big fruit growing districts wherein the latest grading machines are installed and packers work under expert supervision.

In this connection we recently had the opportunity of inspecting the methods of packing and grading Apples for export at the Valley View Orchards, Pakenham Upper. Whilst this article deals with the efforts of one orchard, it is typical of other Apple growing districts throughout Victoria and also in the other States of the Commonwealth.

The Valley View Orchard is owned by Mr. I. Woolf, member of the firm of Messrs. G. Woolf & Sons, of the Wholesale Fruit Market, Melbourne, who has had 40 years' experience in the growing and selling of fruit.

When this orchard was originally planted, Pakenham was selected because of its suitability for fruitgrowing, both in regard to soil and climatic conditions. The quality of the fruit produced here compares favorably with fruit grown in any other part of the world.

To cater for the export markets, planting was confined to the following five varieties: Jonathans, Delicious, Granny Smith, Rokewoods and Yates. These varieties are noted for their color, keeping qualities and also represent varieties from which a rotation of crops can be obtained. Jonathan and Delicious are mid-season varieties and Granny Smith, Rokewood and Yates, late varieties. The wisdom of planting these varieties is being amply demonstrated each year as larger quantities are coming into bearing. It enables shipments to be spread over a longer period than if varieties were confined to all late or early varieties.

During the 1933 season, as in past season, 60 to 70 per cent. of the Apples grown in the orchard have been exported to Great Britain and the Continent, also China, Singapore and other Eastern countries, where an increasing business is being developed each year. The first shipment was forwarded on February 16, and the last shipment of 2,500 cases of Yates Apples left Melbourne on the "Jervis Bay" at the end of June. We reproduce on the opposite page photographs showing the handling of this shipment from the packing and grading right up to the transport and delivery into the ship's hold. Expert packers carefully selected, packed and wrapped every Apple which was packed into attractive softwood cases on which the brightly colored label of the Valley View Orchards appeared. The whole of the operations were personally supervised by Mr. I. Woolf,

and this particular consignment was sent to Mr. J. O. Sims, Covent Garden Market, London, through his agents, Messrs. F. Cave & Co. Pty. Ltd.

This shipment, together with other shipments which were forwarded throughout the year, not only from this orchard, but from the other Apple growing districts of Victoria, in fact all the other States, amply demonstrates that Australia is in a position to supply long lines of good quality fruit, packed and graded up to the highest possible standard. Buyers and retailers of Australian fruit can thus rely on each case being up to a consistently given standard.

### Packing Classes.

It is interesting to note in this respect that the "Valley View" packing shed is placed at the disposal of the Department of Agriculture, who conduct weekly packing and grading classes for local boys and girls, under the supervision of the Department's packing instructor, Mr. Harris.

Approximately 200 acres are planted to Apples at the Valley View Orchards, and the large roomy packing shed which is complete with a "Lightning" fruit grader capable of grading up to nine sizes, packing benches, lidding presses and everything that is necessary for a properly equipped packing house, including up-to-date ball-bearing conveyors to facilitate the handling and to reduce bruising to a minimum.

Adjoining the packing shed is a concrete cool store, one of the most up-to-date in Australia with a capacity of 24,000 cases, and the machinery installed is capable of cooling up to 60,000 as it is the intention of the owner to extend as the trees come into full bearing.

In addition to being a large grower and exporter himself, Mr. Woolf packs and markets fruit for other growers in the district who have always found him ready and willing to assist them in their marketing and cultural problems.

### VICTORIA.

It is understood that the Victorian Government does not concur with the view of the Country Party regarding marketing legislation on the grounds that the High Court has in several instances held that State legislation of this kind is ultra vires.



Loading export apples into railway trucks at Pakenham, Vic.

SHIPMENT OF APPLES TO LONDON BY THE VALLEY VIEW ORCHARDS, PAKENHAM, Vic., ex "JERVIS BAY."



(1) Packing and Grading Apples, (2) Loading Apples from Cool Store to Lorry—note conveyor, (3) Ready for transport to Railway Station, (4) Apples Graded and Packed for Export, (5) Loading Fruit into the "Jervis Bay," (6) Portion of the interior of Valley View packing shed, (7) Stacking Fruit in the hold of the "Jervis Bay."



## AMMONIA IN COOL STORES.

## Why You Should Keep the System Fully Charged With Ammonia.

THE ACTUAL COOLING EFFECT in the cycle of operations in the refrigerating plant is obtained through the so-called expansion of the liquid refrigerant from a liquid state to a gaseous state, and as our memoranda deals only with ammonia as a refrigerant, and systems other than the expansion systems are not likely to be encountered, we will confine ourselves solely to the ammonia expansion system. The importance of keeping the plant fully charged with ammonia is on a par with the necessity of keeping the charge pure, that is, as far as obtaining economical results in the operation of the compressor.

The function of the expansion valves is to regulate the amount of liquid ammonia passing through in order to keep the expansion coils in room or tank down to the required temperature and cutting off the cooling effect at, or near, the compressor cylinder, according to requirements, be it wet or dry compression. When the system is fully charged with ammonia, and providing the valves are in order, this regulation is easy, but when the charge is too low, the expansion valves require to be opened wider, and the supply of liquid ammonia at the valve becomes intermittent, alternately liquid and then gas, calling for constant regulation to keep the compressor working at correct heat. This shortage of ammonia is most easily detected by placing the ear to the wheel or stem of the expansion valve, when a broken hissing sound is heard. When fully charged, a steady sizzle is heard, as the receiver has liquid enough to keep the inlets to the valves covered.

The presence of large amounts of air and foreign gases will also have similar effects to shortage of ammonia, especially when the charge is low, as the receiver will occasionally become "air" bound. No steam engineer would think of keeping a boiler short of water and the refrigerating engineer should be equally careful to avoid operating his plant with a shortage of ammonia if he wants to get the best results out of his compressor.

Now, as the amount of ammonia lost through gland and other leakage is constant, and has nothing to do with the quantity of ammonia in the system, it is certainly most economical to keep the plant always fully charged, adding a few pounds as required, instead of letting it run right down and charging in a cwt. or two. The expert fireman keeps his boiler going with a little and often, both as regards fuel and water, and the wise engineer in charge of the refrigerating machine will do well to pay the same attention to his ammonia charge.

Just a word about overcharge. There is nothing worse. It causes difficult regulation of the expansion valves, high condenser pressure and liquid may come over and cause the compressor to bump. As very few plants are fitted with proper size liquid receivers with liquid level gauges, a full charge is a matter of expert judgment, and if overcharge is suspected by reason of high condenser pressure, the surplus should be got rid of, preferably by blowing off at the air valve, as it is not an easy matter to get it back into the cylinders.

When charging ammonia from the cylinder, there is no more convenient connection than a Werner Ammonia Hose and Nipple to fit  $\frac{3}{8}$  in. connection old-style cylinders. The flexible hose allows the cylinder to be easily tipped for draining and saves time and maybe loss of ammonia if the cylinder happens to slip off the usual box or stool.

## THE ORCHARDISTS' AND FRUIT COOL STORES' ASSOCIATION OF VICTORIA.

The quarterly meeting of the Orchardists' and Fruit Cool Stores' Association of Victoria was held at Melbourne on August 10. There were present:—Messrs. G. F. Fankhauser (Burwood East), A. C. Chandler and R. Langley (Croydon), J. Robinson (Doncaster East), J. H. Lang and H. M. McLean (Harcourt), G. H. Sprague (Hastings), Frank Petty, J. J. Tully and August Thiele (orchardists), W. J. Williamson (Portland), J. G. Aird (Ringwood), T. W. White (Somerville), H. J. Willoughby (Tyabb), F. J. Byrne (Wantirna), A. E. Hocking (Graceburn Valley), E. I. Lawford (Lawford's Fruit Ex.), E. H. Hatfield (Tyong), and the Secretary, J. G. Aird.

Delegates stood in silence in respect of the memory of the late W. Muir, an appreciated helper of the fruit industry.

**Fruit Rejected in Queensland.**—Details were given of fruit rejected in Queensland because of the presence of arsenate of lead. It was decided that a protest be arranged to the Minister of Agriculture.

**Duty on Red Oil.**—The Comptroller-General of Customs advised that the request for a remission of Customs duty on red mineral oils used for spraying could not be granted, on the grounds that the Newport Oil Refineries Pty. Ltd. was producing a similar oil from crude at their works at Newport. The Executive had further urged that relief be granted in this direction, pointing out that the duty was a direct tax on the primary industries, as the oil was not produced in sufficient quantities to meet the demand. The Comptroller-General further replied that in view of the evidence in the hands of the Customs Department the request could not be granted.

It was decided to donate £10 to the Apple Publicity funds.

**Transport Board.**—The report of the Transport Board as affecting fruitgrowers was discussed, the present recommendation being that primary producers' vehicles used for transporting his own or other primary producers' products should be allowed to operate in any part of the State. It was resolved that this matter be left in the hands of the Executive.

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SYDNEY, BRISBANE, ADELAIDE, PERTH, HOBART.

**DETAILED PACKING CHARTS AND GENERAL FRUIT PACKING INFORMATION ARE SUPPLIED FREE ON APPLICATION. "GERRARD SERVICE"**

**Cheaper Brine Concentration.**—The Secretary brought under notice the advantages of using oil fuel against coke for the concentration of brine. An installation of a Dreadnought copper with oil firing attachment with small fan driven by  $\frac{1}{2}$  h.p. electric motor, costing approximately £100 to instal at Ringwood, had resulted in considerable savings. With oil available at 96/6 per ton and coke at 45/- per ton delivered at the store, the cost was 11/- for oil and current, against 38/- for coke to treat approximately the same quantity of brine. The fuel oil installation also gave the engineer a better control, as the same amount of brine could be treated in sixteen hours that would require a week under the previous installation of a Dreadnought copper using coke fuel.

**Cool Storage Research.**—During the afternoon several delegates visited the Government cool stores, at the invitation of Dr. Trout, of the C.S.I.R., and Mr. G. B. Tindale, of the Department of Agriculture, to inspect the Research work being carried out in connection with the storage life of various varieties of fruit. These investigations open up a wide range of possibilities, and when finalised will be of great value to the industry.

#### DIRECT EXPANSION COOL STORES.

##### Automatic Control With Electricity.

At the recent Conference of the Orchardists and Cool Stores' Association of Victoria, Mr. R. Wilkinson, Rural Service Engineer, of the State Electricity Commission, drew attention to the increasing interest in orchard storage, and dealt at some length with the greater economy of power in direct expansion stores compared with those operated on the cold air system. This enabled the small store to successfully compete in storage costs with the large central stores. Still greater economies could be obtained by the adoption of automatic control, which gave three important advantages—more uniform temperature than can be obtained manually, lower power consumption by operation during cool night hours, and full advantage of the very low night time electricity rates. Care was necessary in the selection of plant and control apparatus, but, given suitable equipment, auto-control was more reliable than manual, and not only liberated the orchard store owner for other work, but relieved him of all worry.

The optimum size of orchard stores was the 2,500 case chamber, either singly or in groups. A single chamber could be run for about £40 a year for electric power. Local manufacturers were already making entirely suitable equipment, and control devices to protect the plant against all mishaps are readily available. The speaker recommended growers to thoroughly investigate the possibilities of automatic control as a means of reducing cool storage costs.

At the Victoria Dock Cool Stores, Melbourne, the peculiarities of fruit storage problems are being investigated under the supervision of Mr. G. B. Tindale, B.Ag.Sc. Victorian Dept. of Agriculture, co-operating with the Council for Scientific and Industrial Research. Specimens are enclosed in airtight glass cells and the rate at which they absorb oxygen and exude carbon dioxide is measured from day to day. Apples breathe oxygen for a considerable time after they have been picked. Ventilation has been found almost as important as temperature in cold storage. If the supply of fresh air is cut off the Apple dies of suffocation and quickly turns black, but it has been found when about 10 per cent. of carbon dioxide is in the atmosphere the fruit will keep twice as

## THE GIBBINS



The patent Gibbins' Reversible Disc Plough now embodies special features which enables this plough to be worked right up to the butts of the trees. With the Gibbins, you can throw ON TO THE TREES OR AWAY FROM THE TREES.

The Gibbins is also fitted with ADJUSTABLE UNDERCUT and PATENT REAR-FLOATING DISC, together with PATENT AUTOMATIC ANTI-SIDE DRAUGHT CONTROL. These special features place the Gibbins' Reversible Disc Plough in a position to meet the many requirements on the orchard. You can also convert your Gibbins' Plough into a Spring Tyne Cultivator or Disc Cultivator.

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**GIBBINS FARM IMPLEMENT Co. Ltd.**  
Footscray, W.11

long as when in the fresh air. The Apple is continually giving off gas, and precautions must be taken to prevent the proportion of carbon dioxide reaching 15 per cent.

**Nanneella.**—Citrus growers welcome the attempt to exploit the market in Great Britain, which it is thought may have more important results than many growers so far imagine. Efforts are being made to cope with problems arising from defective drainage. The President of the Nanneella Citrus Growers' Association is Mr. R. J. Vicars Foote; Secretary, Mr. J. Logan.

Speaking at the recent Commonwealth Citrus Conference in Sydney, Mr. C. Mullany said the Victorian Railways Dept. had educated the public to drink citrus fruit drinks. Nearly 50,000 cases were disposed of annually by the Victorian Railways Dept.

## Citrus Gowers!

ALL VARIETIES CITRUS at  
70/- per 100.

CO-OP. BUD SELECTION TREES,  
£4/10/- per 100.

The Best Rooted and Grown Trees in N.S.W.  
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**A. T. EYLES**

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## SETTING OF FRUIT.

### Importance of Bees in Orchards.

Mr. A. G. Strickland, horticultural research officer, Department of Agriculture, Victoria, when speaking recently regarding setting of fruit, said that profuse blooming did not guarantee a large crop of fruit. On a full blooming Apple or Pear tree only one blossom in twenty is actually required to give a commercial crop. Fruit formation depended on many factors, such as the weather, supply of water, pests and diseases, also pollination. At the critical period of blooming, weather was most import-

ant. Rain, cold, frosts and wind are the main causes of the loss of fruit. Sunny bright weather with occasional showers is the ideal weather for setting. Mr. Strickland stated that thrips is the worst pest when they appear in large numbers, and attention to pollination and other factors must be attended to in years of infestation. Brown rot of stone fruits often attack blossoms, but orchard sanitation and correct spraying methods deal effectively with this. Black spot in Apples and Pears, and aphids do affect fruit setting, and effective control measures are available. Waterlogging in winter and spring must be avoided, the applica-

tion of fertilisers from three to four weeks before blooming, also ploughing in green crops early, will ensure satisfactory nutritional conditions for fruit setting.

Apples, Pears, Plums, Cherries and Almonds must be planted so that interchange of pollen between varieties is possible. Lack of bees in some districts limits cross-pollination. One hive of bees to one or two acres of mature orchard is sufficient. There must be considerable overlapping of blooming periods of the two varieties, but even if two varieties bloom at the same time, they may not be suitable for cross-pollination. The Gravenstein is not recommended as a polliniser, nor are certain pairs of varieties blooming at the same time. By alternating rows of two or more varieties, or by grafting several limbs of the pollinating variety in each tree of the main variety, pollination is provided. In a block of one variety, flowering limbs of the desired pollinator put in tins of water and distributed in the orchard are very effective.

### WHOLESALE FRUIT TRADE.

#### New Company Being Formed to Control Fruit Market.

Arrangements are well in hand for the formation of a company which will comprise members of the Melbourne wholesale fruit trade who are situated in the Wholesale Fruit Market Square. The object of the company is to bring one form of organised control over Melbourne's fruit trade and to look after the interests of the tenants in the Fruit Market.

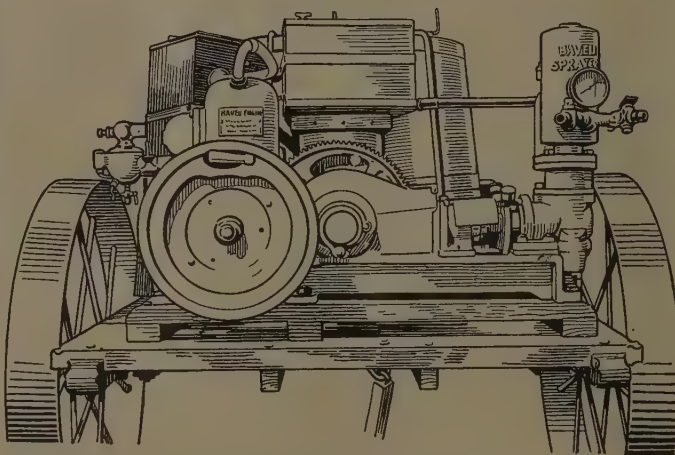
In an official statement, Mr. H. M. Wade, Chairman of the meeting that has met from time to time to form this company, stated that the proposed new company will not only be an advantage to the trade in all matters of business, but will be an advantage to growers, especially in the selling, handling and possibly transport of their fruit.

The idea emanated from the Wholesale Fruit Merchants' Association of Victoria, which is the principal body at present, but as it does not cover all merchants in the trade, a new company is being formed which will embrace all those members situated in the Wholesale Fruit Market Square.

It is anticipated that the company will commence operations from Monday, September 4, on which date a full meeting of those interested will be held.

A further report regarding the objects and activities of the company will be published in our next issue.

## The BAVE-U — Power Sprayer



**A**N Engine built primarily for service but with every refinement such as ball races fitted to crankcase bearings, a pump embodying every modern improvement such as eccentrics enclosed running in oil, eccentric shaft fitted with ball races, valves detachable and interchangeable—these features are responsible for the high opinion held by the Fruitgrowing Industry of The "Bave-U" Power Sprayer.

Ask a pioneer fruitgrower, he will tell you that The "Bave-U" is the pioneer Australian-made Power Sprayer, and the best for reliability and unceasing service.

SEE THE "BAVE-U" AT THE ROYAL AGRICULTURAL SHOW STAND, SMITH STREET.

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# New Principal in Orchard Ploughing.

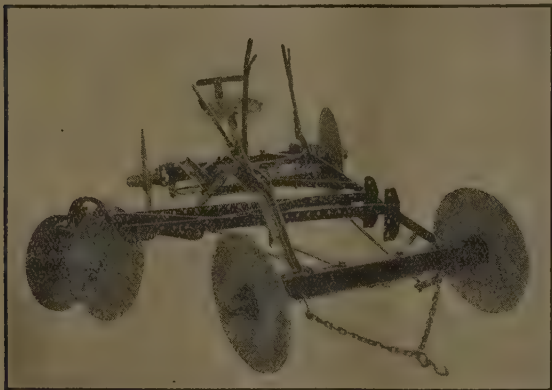
A Notable Australian Invention.

**R**EMARKABLE INTEREST was shown at a ploughing demonstration at Doncaster, Vic., on August 31, when Messrs. Herbert and Frank Petty showed a new patent double-furrow disc orchard plough in action. There was a representative attendance of fruitgrowers from Doncaster, East Burwood, and surrounding districts, and the Messrs. Petty were complimented on their invention, which, it was stated, marked a new era in orchard cultivation.

## The Plough Described.

Petty's new double-furrow disc orchard plough is the result of a lifetime's study in orchard implements by practical fruitgrowers. Instead of the back-breaking work of walking behind and guiding the shifting handle single-furrow plough to cut out the strips between the trees, it is possible with this new implement for the operator to ride on the plough seat. Further, it is to be noted that the double furrow disc is a great time and labor saver.

During the demonstration, growers noted that the work was equally well performed when using either tractor or horses. Further, by altering the set of the disc,



Petty's New Double-furrow Disc Orchard Plough.

both ploughing on and ploughing off were attended to. This plough has an entirely new principle, the frame being mounted on four straight disc wheels which can be steered in unison or separately. The cutting discs are mounted on an extended arm at right angles to the frame. This implement can be steered in and out between the trees, giving an even uniform cut. Meanwhile, the tractor or horse continue in a straight line clear of the branches.

It has been noted when operating other disc ploughs that there was invariably a side slip. The new principle in Messrs. Petty's plough does away with this side slip. It will be noted from the illustration on this page that the wheels are constructed on the straight disc principle which grip the ground and hold the resistance against the extended cutting discs. It is also to be noted that this new patent plough is pulled from the centre of the tractor and does not need any extended rack or arm on the tractor.

The depth of the cut is controlled by a lever operated from the driver's seat. The steering is accomplished by levers at the operator's feet supplemented by a hand

lever. In actual operation, the cutting discs of the plough can go within an inch or two of the tree trunk and immediately on clearing the trunk, a slight movement of the levers provides for an inward sweeping motion between the next tree, straightening as the tree is approached. The soil is thus ploughed close to the tree trunk on the one side, and, on the same procedure being followed on the opposite side, the land between the trees is completely cut out. The plough can be steered two feet out of straight either way, thus giving remarkable ease of operation.

During the demonstration, it was noted that this new plough does its work equally well on a hill-side as on the level ground. Another pleasing feature is that the discs do not choke with weeds.

\* \* \* \* \*

Conversing with growers during the demonstration, it was pleasing to hear the congratulations which were tendered to the Messrs. Petty for their excellent invention, which, it was stated, would meet with ready acceptance by orchardists throughout Australia. As the principle is entirely new, world patents have been applied for.

The opinion was expressed that in addition to the ease with which an otherwise difficult ploughing operation is performed, this new implement would save its cost in one season.

This implement can be converted into a disc plough for ploughing the centres of the lands.

Many labor-saving devices for orchard cultivation have been developed both in Australia and abroad. It is to the credit of these capable Australian fruitgrowers that they have developed a new principle of world-wide importance.

The "Fruit World" representative who attended the demonstration was impressed with the unique value of this new invention.

The Messrs. Petty would be pleased to supply any further details, also to give demonstrations in fruitgrowing districts. Correspondence on this subject should be addressed to Mr. Herbert Petty, Main-road, Doncaster, Victoria ('phone WX 2428).

## Poultry Notes.

### FIELD PEAS AS POULTRY FOOD.

"X.Y.Z." (Bankstown, N.S.W.), writes:

**Ques. 1.**—Are there any good qualities in field peas, whole or crushed, for poultry?

**Ans. 1.**—Crushed peas very often consist merely of ground hulls, and it is not economical to feed them. The nutritive value of peas is only 3.5 as compared with wheat 6.9. If peas are grown on the farm, however, and are available, they can be given in crushed form in the mash, using in the ratio of about 3 or 4 per cent. Fowls frequently do not like the whole peas in the grain ration, and it is only some birds that will eat them. The most useful way to use peas for poultry is as green feed. As such they form a very fine variety.

### Milk for Fowls.

**Ques. 2.**—How many pints of new milk should be fed to every 100 adult fowls?

**Ans. 2.**—I presume you mean separated or skimmed milk, as it would not be profitable to feed new milk to fowls. One gallon of skimmed milk is equal to 0.9 lb. of the dried milk product, and can be given to fowls in the proportion of 10 per cent. of the mash.



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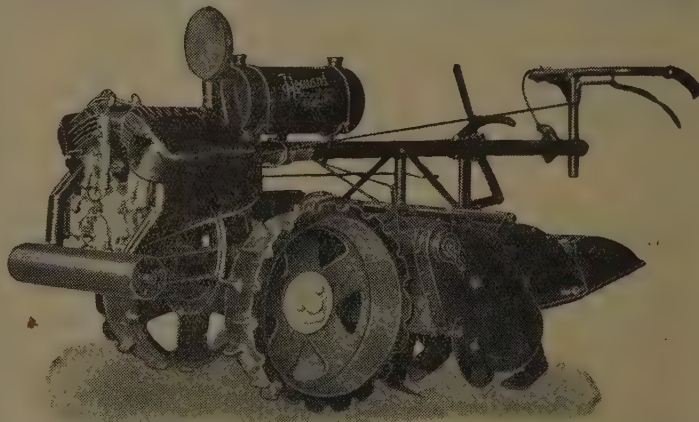
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HOWARD ROTARY HOE "EIGHT," the ideal machine for Orchard Cultivation. Cuts 3ft. wide and up to 9 inches deep. May be equipped with Power Spray, fertiliser distributor, furrowing attachment, saw-bench, and many other useful attachments.

Models of the Howard Rotary Hoes  
are supplied for all classes of work.

For further particulars ring or write the Manufacturers—

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### TWENTY YEARS' SERVICE TO ORCHARDISTS.

Efficient service to fruit producers has been rendered over the past 20 years by Victor Leggo & Farmers Ltd., which firm has specialised in spraying compounds and preparations for pest control. With a staff of qualified chemists, the lines put up by Victor Leggo & Farmers have won the confidence, not only of fruitgrowers, but primary producers generally. The lines which interest orchardists include arsenate of lead, copper sulphate, red spraying oil, Bordeaux mixture, atomised sulphur (paste and powder), dusting sulphur, "Arzen" (concentrated soluble arsenic), lime sulphur wash, prepared white oils, nicotine sulphate, spray spreader, tree banding, weed killer, manurial insecticide, etc. These products are put up under the well-known "Vallo" brand. The firm has recently published some interesting bulletins including "The Progress Path to Prosperity," "Service and Progress," "Patient Efforts Rewarded," which are available on request from 218 Queen-street, Melbourne, 9 Phillip-street, Sydney, 72 Albert-street, Brisbane, and from their agents in the several States.

### SPRAYING OF PEARS FOR SUMMER SPOT.

The Department of Agriculture has issued a progress report on experiments that have been conducted by Messrs. S. Fish, assistant plant pathologist, and F. J. Greator, orchard supervisor. It is stated that summer spot on fruit is a serious factor limiting the production of Pears of a standard suitable for export. First grade Pears must be free of spot and the effect on a second grade or plain Pear must be limited to a spot with a diameter of one-quarter of an inch. Last year about 25 per cent. of the Pear crop was not suitable for export owing to this disease. William's Bon Chretien, Packham's Triumph, Buerre Bosc, Vicar of Winkfield, and Winter Nelis are the varieties most suscep-

tible. Winter Cole, Howells, Josephine and Keiffer are resistant varieties, but are not immune.

The experiments conducted at Doncaster show that the controlling effect of Bordeaux spray increased generally the later the spray was applied. When this was done when the buds were showing white petals a rather severe russet occurred later on the young Pears. The importance of two pre-blossom Bordeaux sprays, and a fruit cover spray in preventing development of summer spot on Pears was also demonstrated, and it was found that Bordeaux mixture was more effective than lime sulphur. Pears are sensitive to spray injury, but Bordeaux mixture (6-4-40) applied just as the young folded leaves were protruding, and again as the folded leaves were well separated from

the unopened blossom bud, did not cause any injury to Packhams, Williams, Winter Nelis, or Bosc. Spraying with half-strength Bordeaux mixture produced some russet on all these varieties, but they were included in the export standard grade.

### Farm Produce Agents' Act.

Several amendments to the Farm Produce Agents' Act are now before the Victorian Legislative Assembly.

Commenting on the amendments, the Minister for Agriculture (Mr. Allan) stated that there were unscrupulous persons trading: such were not at present registered. Instances were on record where producers had sent goods on consignment and had received no returns whatever. The amendments were designed to protect growers from dishonest men posing as traders.

### ORANGE AND LEMON EXPORT.

A letter is to hand from Messrs. Scott & Edwards, fruit exporters, Melbourne, enclosing copy of a communication from Mr. C. V. Rees, of Lake Boga, Victoria, in which the latter expresses keen regret that his experimental consignment of Oranges and Lemons was prevented by inspectors from being exported. The fruit was rejected by the inspectors as they considered it showed blemishes and was rather coarse in the skin. The Lemons were also rejected as being too coarse.

Mr. Rees explained that the Oranges submitted for export comprised "Thomson" Navels from the black river flats, Washington Navels from the red loamy soil and the coarser fruit grown on pine ridges. The Lemons were selected from the most vigorous trees in the district. The fruit was for experimental purposes and would have been reported on by a special observer in London. Previous comments by this observer were to the effect that the "coarsest" fruit had arrived in the best condition, with the rind sweated down to a fine texture and thin. The shipment was arranged before there was any talk of a Government guarantee. This guarantee was not sought and was not wanted. The opinion was expressed that the rejection was unfortunate as it has spoilt several years' investigational work.

### Apples for Queensland Must Have Spray Residue Removed.

Recently the Queensland health authorities rejected consignments of Victorian Apples because of the arsenical spray residue on the fruit.

## YOU CANNOT DISPENSE WITH POTASH

A fertilising mixture without Potash cannot possibly give you the maximum return from your orchard. For more and bigger fruit, and an increased income per acre, use



The use of Potash in the proportion of 2-3 cwt. to the acre, with other fertilisers, makes a perfectly balanced dressing. For prices apply to your fertiliser agent.

Write for further particulars to:  
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POTASH MAKES *all* THE DIFFERENCE



The Minister for Agriculture has received a report from the Superintendent of Horticulture (Mr. J. M. Ward) who was sent to Brisbane to make investigations on the matter. Mr. Ward states that there is no desire to exclude Victorian Apples from the Queensland markets. The main object is safeguarding the health of consumers in Queensland, as a number of analyses showed that the statutory maximum quantity of arsenic on Victorian Apples was being greatly exceeded. Mr. Ward is of the opinion that if Victorian growers and exporters move all traces of spray by careful wiping, or by dipping in a dilute solution of hydrochloric acid before packing, the situation can be met. Details of the chemical dipping process can be obtained upon application to the inspectors of the Department of Agriculture.

#### MERBEIN RESEARCH STATION.

A MEETING of the Advisory Committee of the Commonwealth Research Station, Merbein, Vic., was held at Merbein on August 12. There were present: Messrs. D. C. Winterbottom (Chairman); S. P. Bromfield, J. Lochhead, A. E. Cameron, D. Gordon and A. V. Lyon (Secretary). Mr. Lyon reported that further studies on the irrigation requirements of vines was being carried out, with approximately 4 inches of water at each irrigation in a soakage period of six to eight hours. It was decided to invite Sir George Julius and Dr. Richardson to visit Mildura in early spring.

Mr. Winterbottom, referring to complaints from London said that growers were not thoroughly drying and bleaching the fruit. In particular,

all light colored fruit should be bleached to the point where the green tinge disappears. It was established that treatment after removal from the racks resulted in the color required for overseas markets.

Mr. Cameron said growers left too many canes on the vine; experiments had shown the disadvantages of using more than eight canes. Growers should revert to the former practice of utilising only the best six or eight canes per vine.

Messrs. Bromfield, Lochhead and Gordon considered that irrigation research, in indicating measures for control of salt and for reducing the cost of irrigation, must be considered a major problem. Growers were in a receptive frame of mind in regard to this work, and special efforts should be made to expedite the movement for the introduction of sound irrigation practices. It was resolved:—

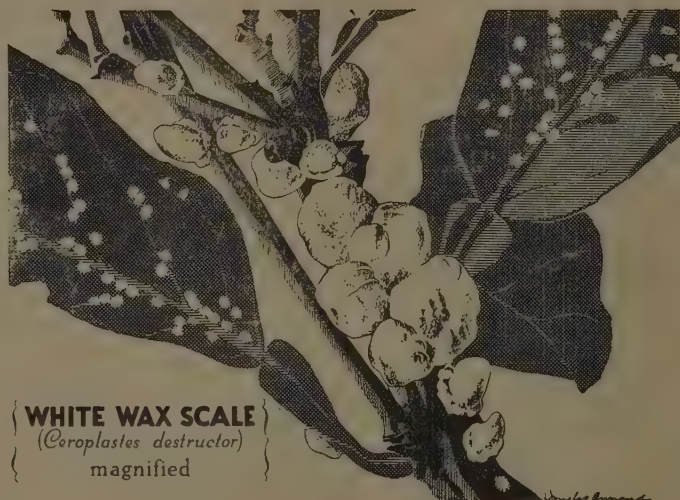
(i) That at least one properly-equipped irrigation field, to demonstrate efficient minimum irrigation, should be selected in each of the districts of Merbein, Mildura and Red Cliffs; and the methods employed on these fields, and on similar fields established elsewhere, be brought under the notice of settlers as soon as possible.

(ii) That attention of producers be directed to the packing and marketing difficulties associated with the delivery of Sultanias improperly bleached, and to the methods necessary to eliminate this fault.

(iii) That prior to the next pruning season, the results of the pruning investigations should be brought before growers in all districts.

#### TRADE WITH THE EAST.

A Premiers' Conference held in Sydney early in the year decided that each State should form an Advisory Committee representative of the Government, primary producers, shipping, finance, commerce and manufacturers to deal with the question of promoting Eastern trade. The Victorian Committee is as follows:—Mr. Harold Cohen, M.L.C., representing the Government; Messrs. W. A. Leitch (Chairman Associated Banks), W. H. Kendall (Vice-President Chamber of Agriculture), G. D. Young (Overseas Shipping Association), W. S. Reid (Chamber of Commerce), R. F. Sanderson (Chamber of Manufactures), G. Delbridge (Butter Exporters), J. Gatehouse (President Victorian Timber Mill Owners' Association), E. W. Quinn, Manager, Hardwood Millers' Association), E. I. Lawford (Victorian Fruit Marketing Association).



## Save Trees and Money

Atlantic Bordeaux Spreader can be used on citrus trees, for the control of White Wax, White Louse, Brown Scale, and Red Scale, in the proportion of 1 gallon of Atlantic to 50 gallons of water. It is ideal as a spreader for Nicotine Sulphate, Arsenate of Lead, etc.

# ATLANTIC

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Greentree, H. J.  
Hop Lee & Co. Ltd.  
Kennett, F. C.  
Lockart, H. C.

Moss, J., & Sons.  
Muscgrove, W., & Son.  
McEnally, R.  
Rogers, F. H. G.  
Slater, Jas.  
Schuster, A. E.  
Smith, L.  
Stubbs, J.  
Sunnyside Orchards Ltd.  
Ward & Felton.  
Young, Frank.

#### VICTORIA.

### Melbourne:

Bell, Banson Pty. Ltd., Wholesale Fruit Market.  
Cave, F., & Co. Pty. Ltd., Wholesale Fruit Market.  
Davis, J., Pty. Ltd., Wholesale Fruit Market.  
Frankel, H. & S., Wholesale Fruit Market.  
Lister, G., Pty. Ltd., Wholesale Fruit Market.  
Millis, A., & Sons, Wholesale Fruit Market.  
McLean, N. N., Pty. Ltd.  
Mumford, J. G., Wholesale Fruit Market.  
Pang & Co. Ltd., H. Louey, Wholesale Fruit Market.  
Patrikeos, P. A., Wholesale Fruit Market.  
Pitt, A. E.  
Producers' Dist. Society, Wholesale Fruit Market.  
Ross, J. W., Wholesale Fruit Market.  
Sang Goon & Co., Wholesale Fruit Market.  
Silbert, Sharp & Davies, Wholesale Fruit Market.  
Stott & Sons, T., Wholesale Fruit Market.  
Tim Young & Co. Pty. Ltd., Wholesale Fruit Market.  
Tong, W. S., Wholesale Fruit Market.  
Vear, F. W., Pty. Ltd.  
Wade, H. M., & Co., Wholesale Fruit Market.  
Wilson, H., Pty. Ltd., Wholesale Fruit Market.  
Wing, R. A., & Co., Wholesale Fruit Market.  
Wing, Young & Co., Wholesale Fruit Market.  
Woolf, G., Wholesale Fruit Market.  
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple  
Court, 428 Collins Street, Melbourne.  
Young, J. H., & Co. Pty., Wholesale Fruit Market.

### Brisbane:

Barr, A. S., Fruit Exchange.  
Cooksley & Co., Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
Winters, E.

### QUEENSLAND.

### Hobart:

Eric Burgess Pty. Ltd., 88 Collins Street, Hobart.  
E. R. Cottier Pty. Ltd., Temple Place, Macquarie Street.  
Jones, H., Co. Ltd., Fruit Exporters.  
Peacock, W. D., & Co., Fruit Exporters, and at London.

### TASMANIA.

### Launceston:

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

### Dunedin:

Co-operative Fruitgrowers of Otago Ltd.

### NEW ZEALAND.

### GREAT BRITAIN.

### Hull:

London and North-Eastern Railway, 7 Bridge-street,  
Sydney, N.S.W.

### London:

Lewis, E. H., & Son Ltd., Covent Garden, London.  
Margetson & Co. Ltd., Covent Garden, London.  
Monro, Geo., Ltd., Covent Garden.  
Pask, Cornish & Smart, London.  
Port of London (Capt. A. W. Pearse, 10 Bligh St., Sydney).  
Poupart, T. J., Ltd., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
White & Son Ltd., London Fruit Exchange, Spitalfields,  
E.I.

### Manchester:

The Port of Manchester Rep., W. J. Wade, 8 Bridge-  
Street, Sydney.

### Bremen:

Fruchthandel, Gesellschaft.

### Hamburg:

Astheimer, P. H., & Son, Fruchthof  
Gustav Bey, Hamburg.  
Int. Fruit Import Gesellschaft.  
Lutten, J. H., & Sohn, Hamburg  
Stier, Aug., Fruchthof.  
Timm & Gerstenkorn.

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ESTABLISHED 1894

FRUIT COMMISSION AGENT

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# Studies In Root Stocks.

(By R. G. Hatton, M.A., Director E. Malling Research Station.)

(Continued from August "Fruit World.")

**I**N the August "Fruit World" appeared the first article of this series, dealing with the report by Mr. R. G. Hatton, M.A., Director of the E. Malling Research Station, on the subject of root stocks. Fruits include Apples, Pears, Peaches, Plums, and Cherries. The August article dealt with a general summary, methods of vegetative propagation, and the marked variability of the vegetatively raised material.

**Investigation Into Its Causes.**—The problem (i.e., the marked variability in the vegetatively raised material) involves investigation along two distinct lines:—

(a) The individuality of those plants raised from some form of cutting or layer, and subsequently growing upon their own root system.

(b) The individuality of those composite trees, each of which consists of a scion (bud or graft) from the original parent, and an extraneous root system (the stock) initially developed as a separate entity.

**Irregular Performance of Plants Grown on Their Own Roots.**—Investigations under heading (a) are of a fairly simple nature. They involve a period of identification, description and recognition, to ensure that the plants are true to name and variety. Then must follow a period of strict testing of the capabilities of these apparently true plants by recognised methods of field experiment and statistical analysis.

Finally, if indications of the existence of superior plants are sufficiently insistent, a period of selection and development of desirable strains and varieties is necessary.

Work upon such lines in England (2, 3) has already emphasised certain causes of individual variation in plants so raised.

**Nomenclature and Impure Lines.**—A very frequent source of trouble is the fact that the varieties of plants have not been maintained pure, individuals of other varieties having been allowed to creep in. In some cases these extraneous individuals comprise the greater part of the sample. Sometimes this is due merely to ignorance and carelessness, but there are indications that it is also due, in some cases, to the development of "rogue" plants, often vegetatively vigorous and partially sterile.

**"Rogues" and Bud Variation.**—Sometimes these "rogues" have been due to a definite bud variation or "sport," sometimes to the unavoidable dropping of seed. In many cases, the origin of the worthless "rogue," which may crowd out the desired variety, remains obscure, though it is suggestive to note that the same "rogues" appear over and over again associated with the same varieties.

**Strains from Different Sources.**—It has further been brought to light (2, 4) that particular strains of the same variety received from different sources may be, at least for a period, much more profitable than others. Thus, in the case of Raspberries, three varieties obtained from a single farm have all consistently cropped better than any other strains of the same varieties, sometimes to the extent of over half a ton per acre. Whilst this is sometimes obviously due to the comparative freedom of certain strains from disease, the cause is not always so clear, and may reside in the influence of different soil and climatic conditions. There may also be differences because by the method of vegetative propagation employed.

**Incidence of Disease.**—Finally, many strains of varieties

which continue to circulate in commerce have become almost worthless through the ravages of diseases or pests. Here, again, by careful methods of hygiene, "roguing," and selection, it has proved possible to re-establish clean strains of valuable varieties which would otherwise prove unproductive.

The weight of evidence in favor of pursuing such lines in this country is now sufficiently strong, in the case of Currants, Raspberries and Strawberries, to suggest that they may have a very wide application to plants not yet so closely observed. The same principles as are involved in "trap nesting" and milk recording would appear, at least in part, to be applicable to horticulture as well.

**Irregular Performance of Budded and Grafted Trees.**—

The investigations under heading (b), though far more complex, involving as they do the individuality and part played both by the scion and the rootstock, separately and unitedly, have, in a comparatively short period of time, yielded even more striking results, especially with regard to the influence of the root-stock, which it is here particularly desired to stress.

**The Scion and Its Selection.**—With regard to the selection and influence of the individual scion, it must here suffice to say that, in the deciduous fruits, although there are probably slight bud mutations not infrequently taking place, and occasionally obvious ones occurring, no such good case has yet been established for the detailed selection of buds or grafts as seems to have been proved in the case of the citrus fruits (5). At the same time the claims of the "pedigreed" tree require further investigation now that they can be tested on standardised rootstocks.

**The Influence of the Scion.**—With regard to the comparative influence of particular varieties of scion upon any varieties of root-stock, it has been found (6) that, although such an influence does exist, it appears to be quantitative rather than qualitative, and at any rate quite subsidiary to the much more potent reciprocal influence of the root-stock upon the scion.

It has also become apparent that certain scions exhibit peculiar partialities or antipathies for certain stocks and combinations, frequently in a manner contrary to expectation. (To be continued.)

## BIOLOGICAL CONTROL OF INSECT PESTS.

American scientists have visited China, India, Australia, South Africa and other parts of the world in the hope of finding predatory insects to control orchard pests. Mr. Harold Compere, Research Associate in Entomology of the Riverside Citrus Experiment Station, California, recently visited Asiatic countries seeking for parasites to destroy the red scale and other pests.

### Wanted to Sell

One HARVEY 9ft. 6in. TRACTOR POWER LIFT SPRING TOOTH CULTIVATOR. No further use. Any reasonable offer. HAROLD SYMES, "Leura" Orchard, Harcourt.

## An Important Reminder

... to all ...

## FRUITGROWERS

FRUIT SETTING is at hand. Have you done all that is in your power to ensure that this—upon which depends entirely your next year's income from your trees—will be satisfactory?

Mr. A. G. Strickland, M. Agr. Sc., Horticultural Research Officer, in a recent broadcast address, gave these as the factors influencing the set of fruit which are within your power to control:—

1. Satisfactory pollination.
2. Insect pest control.
3. Availability of moisture and plant nutrients, particularly NITROGEN.

*The Form of Nitrogen to apply is*

# Sulphate of Ammonia

**The Time is NOW**

An application of 2lbs, Sulphate of Ammonia per tree will increase your setting. An increase of half a case would represent at least a 400 per cent. return.

**Think it Over**

... and ...

**Purchase Before it is Too Late**

Visitors to the Melbourne Royal Show are cordially invited to call and discuss their manurial problems with Messrs. Boyle & Gepp the advisory officers of this Company who will be present at the stand of Nitrogen Fertilizers Pty. Ltd. in its usual position 30 LENNON STREET.

*Issued by Nitrogen Fertilizers Pty. Ltd., 360 Collins Street*



# COOL STORAGE OF FRUIT.

Biggest Factor in Developing the Industry

Increase in Cool Storage Installations on Individual Orchards and at Fruit Canneries.

Appreciated Services of R. Werner & Co. Pty. Ltd.

**P**ROBABLY NO SINGLE FACTOR has ever had greater or more beneficial effect on the Australian fruit industry than that of cool storage. By means of cool storage the marketing period has been considerably extended. Certainly growers have benefited because the possession of a cool store is the hallmark of a progressive district.

Fruit cool storage has come to its greatest development in the State of Victoria, where there is now storage capacity for a million and a quarter cases. The other States have not been slow to erect cool stores for the benefit of all concerned.

In the orchard centres, cool stores are usually co-operatively owned, being situated in close proximity to the railway station. By providing facilities for packing the cool store thus becomes an appreciated centre of district activities.

**Cool Stores on Orchards have proved Profitable Investments.**

Apart, however, from these large district cool stores, a new feature has been developed in that growers are finding it an advantage to have a cool store on the property. Such cool stores usually range from a capacity of 5,000 to 15,000 cases. It frequently happens that it is far more economical to have a cool store on the property than to cart the fruit often over indifferent roads several miles to the district cool store. It is thus the actual locality of the orchard itself which determines the desirability, or otherwise, of having a cool store on the property.

Then again, where a grower decides to instal a cool store on his orchard, he can let out a certain portion of the space to his nearby neighbors. The

question is purely one of economics, and the fact that so many growers have found it to be of value to have cool stores on their properties, demonstrates the worthwhileness of the installation, thus providing a subject of serious consideration for other growers.

In these times when trucking, mileage and labor have to be husbanded, the investment of a cool store right on the property is a proposition well worth entertaining.

The new features which have been introduced include automatic controls, are very attractive. The actual costs of running a 5,000 case cool store are limited to power, oil and general upkeep.

**An Essential Adjunct to every Fruit Cannery in an up-to-date Orchard is a Cool Store.**

**Cool Stores at Canneries.**

Scientific research has demonstrated that Peaches can be kept successfully for several weeks in cold storage, thus for cannery operations the work of handling Peaches for canning can be conveniently spread. As regards Pears, it is most interesting to note that after cold storage, Pears ripen evenly. This is a matter of great importance, as otherwise where Pears arrive in large quantities in the flush of the season, considerable waste is unavoidable. There is still another factor and that is the pre-cooling of Peaches before despatching to interstate markets. Here again scientific investigation has been of value to the industry; pre-cooled Peaches sent in iced trucks to interstate markets have carried well and brought good prices, much waste having been eliminated.

In the development of cool stores throughout Australia, much credit is due to the firm of R. Werner & Co. Pty. Ltd., 54 Burnley-street, Richmond, Victoria. This firm has specialised in the business. Their installations have proved durable and accurate. At the same time, the firm conducts an appreciated service system in keeping the plants in good condition. Based on long experience, Messrs. R. Werner & Co. Pty. Ltd. recommend the direct expansion system for small cool stores as being both efficient and economical, the running cost also being low.

**No Orchard District can claim to be Progressive if lacking a Cool Store.**

**At the Melbourne Show.**

This firm desires it to be known that their services are always available to answer technical questions relating to cold storage and new installations. At the Royal Agricultural Show to be held in Melbourne from September 21 to 30, Messrs. R. Werner & Co. Pty. Ltd. have their usual stand at the corner of McCracken-avenue and Lobb-street, and will be pleased to answer enquiries.

The Werner refrigerating machinery can be inspected at the firm's city showrooms, 610 Lit. Collins-street, Melbourne. Growers and others interested in N.S.W., South Australia and West Australia can obtain information from Messrs. Werner & Co.'s agents as follows:—R. J. Menzies, Pippax-street, Sydney, N.S.W.; Harris, Scarfe, Grenfell-street, Adelaide, South Australia, and W. G. Davies, Cambray Chambers, St. George's-terrace, Perth, W.A.

## THE VICTORIAN FRUIT MARKETING ASSOCIATION.

The monthly meeting of the executive was held at the Commercial Travellers' Association, Melbourne, on August 25, Mr. G. W. Brown, presiding. There were also present: Messrs. H. Ford, A. S. Harrison, F. R. Mellor, E. I. Lawford, W. H. Carne, J. W. Bailey, F. Cave, K. V. Eagle, W. A. Thiele, W. P. Hutchinson, W. A. Webb, J. M. Jacobs, also Messrs. E. Meeking and F. M. Read (Dept. of Agric.) and R. E. Boardman, Secretary. Apologies were received from Messrs. J. B. Mills and C. H. Jost.

The minutes of the previous meeting were taken as read and confirmed.

The President reporting on his attendance at the Sydney freight conference, in company with Mr. J. B. Mills, detailed the negotiations. Wool, meat and butter industries had been offered the following freight reductions—wool one-sixteenth of a penny, equaling about £200,000; meat  $7\frac{1}{2}$  per cent. to 8 per cent., £140,000. The fruit industry was offered a reduction of 2d. per case for June shipment and 3d. per case for July shipment, plus proportion of any reduction the Government might make to the Shipping Companies in the way of reduced taxation, port charges, etc. The fruit industry representatives had declined to accept the terms offered. A vital question was that of better distribution, which is to be brought about by a Freight Committee of the Australian Apple and Pear Export Council. The formation of this Freight Committee was approved by interstate associations. A clause in the Shipping Agreement would provide for decisions of the Freight Committee being adhered to. The British market should be fed at the rate of 250,000 to 300,000 cases a week for 14 weeks, about 50 per cent. of which could go to London. The average fruit consumption in Britain was about one and a-half million cases a week, of which 1,100,000 came from local and other sources, leaving from 300,000 to 400,000 per week from Australia and New Zealand. There have recently been large plantings of Apples in England, cool storage and gas storage installations had been greatly developed and Britain was prepared to protect her own primary producers.

Shipping companies had pointed out their difficulties in handling fruit freight—the quantity of dunnage used, also claims for damaged cargoes. The fruit industry had considered the disbandment of the Australian Overseas Transport Association because of the restrictive clause preventing the chartering of outside tonnage. This would mean a freight war which the Government was anxious to avoid. Also, other exporting industries were not agreeable to the disbandment of the A.O.T.A.

A full discussion ensued, the subject being attacked from many angles. Some favored the Export Control Bill. By courtesy of Mr. Meeking, a copy of the Export Control Bill was produced. The basis of State representation, as provided in the Bill, was deemed to be unsatisfactory. No provision was made for representation by shippers. The dates for certain Agreements were specified and as these were now out of date, it was noted that an Act of Parliament would be necessary to amend the Bill. It was decided on the motion of Messrs. Mellor and Lawford that a Committee of three growers and three shippers be appointed to report on this matter. Those appointed were—Growers: Messrs. H. Ford, J. W. Bailey, E. I. Lawford; shippers: Messrs. A. S. Harrison, J. B. Mills, F. R. Mellor. A meeting of the Committee to be held on Friday, September 15, at 11 a.m., at the C.T.A., and a copy of the Export Control Bill to be supplied to every member of the executive.

**Research Committee.**—Mr. Bailey reported the attend-

ance at the Research Committee meeting of Mr. A. O. Mendelsohn (Analyst) who had presented a programme for utilising fruit as follows:—Pulping and supplying in gallon and other tins for confectionery and fruit pie trade; canned Apples; spiced Apples; cider; unfermented Apple drinks and pectin. A complete commercial survey would cost £260. Mr. De Castella, Government Viti-culturist, had written, giving details of cider manufacture.

The Committee had approved of the principle of grade standards for trees offered for sale.

The report was adopted.

**Arsenic on Apples.**—Mr. Lawford reported on the action taken by the Southern Fruitgrowers in approaching the Premier and Minister for Agriculture regarding Queensland's action in rejecting Victorian Apples and Pears. Prompt action had been taken by the Victorian Government, and Mr. J. M. Ward had been sent to Queensland and provision had been made in Queensland for certain fruit to be cleaned instead of having fruit returned to Victoria. It was decided on the motion of Messrs. Carne and Webb, that a letter of thanks be sent to the Premier, the Minister for Agriculture and Mr. W. H. Everard, M.L.A., for their prompt action.

**Fruit for New Zealand.**—Mr. W. A. Thiele reported that the New Zealand embargo had been partially lifted. South Australian Lemons were now going forward to New Zealand. The Southern Fruitgrowers' Association was actively urging the lifting of the embargo to provide for export to New Zealand of Southern Victorian Lemons. Mr. Harrison spoke in favor of the effort to secure this export trade and moved that a letter be sent to the Southern Fruitgrowers' Association, supporting their action. Seconded by Mr. Webb.—Carried.

**Fruit Export.**—Mr. Lawford reported that orders were being received for fruit for discharge at ports between Colombo and Marseilles, but no shipping facilities were available. He moved that a letter be sent to the Overseas Shipping Representative, directing attention to this matter and requesting shipping facilities for intermediate ports between Colombo and Marseilles. Seconded by Mr. Mellor.—Carried.

The meeting then closed.



England has a larger area under fruit than has Australia. Messrs. Champion Bros., near Maidstone, Kent, have 800 acres of apples, cherries, gooseberries, etc. This picture shows 347 barrels apples (approx. 11 tons) leaving for market; three similar loads are sent daily, five days a week for a month.

(Photo by courtesy E. W. Harris and F. R. Mellor.)



## SYDNEY VEGETABLE MARKET.

## Proposed New Building.

The sub-committee of the finance committee of the Sydney City Council is considering a proposal to demolish the existing vegetable market and build a new market on

the same site. The approximate cost will be £88,000. There was an original proposal to rebuild all the markets, but owing to lack of funds, the project has not been gone on with. If the building of a new vegetable market is favorably considered, the scheme will not be put in hand until next financial year, as no provision has been made on the current year's estimates for this expenditure.



**F. Chilton,** Established 1894.  
Fruit Commission Agent,  
Licensed Under Farm Produce Agents' Act.  
Highest Market Prices, Prompt Returns, Reliable Advice.  
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For Satisfactory Results, Send Your Fruit to

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Fruitgrowers and General Distributors  
47 City Markets, Hay Street, Sydney  
Consignments to Our Care  
Expertly Attended to.

References.—Bank of N.S.W., Haymarket, Sydney; Batlow, N.S.W.

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Regular consignments of  
fruit well packed and  
graded realise best prices.

**R. McEnnally**

Licensed Farm Produce Agent,

Information and A/c Sales Promptly.

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References All Growers Throughout Australia.

Phone: M 3045.

Private: J 4401

Telephones: MA 4432, Epping 840. Est. 1896.  
Bankers: Bank of N.S.W., Haymarket.

**H. BLACK & SON,**

Licensed Farm Produce Agents,  
17 City Markets, Sydney.  
Consignments of Fruit, Tomatoes, and Other Produce  
Received for Sale.  
Cases Sent on Application.  
Cash and Account Sales Rendered Weekly.

## FRUITGROWERS—

Established 1904.

**Ward & Felton,**

Licensed Farm Produce Agents,  
City Markets, Sydney, Offer You  
Expert Salesmanship, Dependable Advice, Prompt  
Returns, and a Cheque that is not a "Boomerang."

One Consignment—Long Attachment.

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**W. Musgrove & Son,** Licensed Farm Produce Agents,  
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Reference—Bank New South Wales, Haymarket.  
Our Motto—Quick Sales and Prompt Settlements.  
You will be Satisfied by Giving us a Trial.

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References: Union Bank of Australia, 377 George St.,  
Sydney, and Growers.

## SYDNEY MARKET.

Month of August.

**T**RADING for the month under review was extremely dull.

The weather generally as quite seasonable, and the reason for the falling off in demand must be looked for elsewhere, and can probably be attributed to the general economic conditions. The consuming public has only a certain amount to spend on fruit and vegetables. Vegetables during the past month have been realising fairly high values, and it has always been accepted that dear vegetables mean a reduced demand for fruit.

Exports of Oranges continued, two shipments being sent to London, by the "Chitral," on 11/8/33, and the "Bute-shire," 24/8/33.

Unfortunately the first shipment to reach the U.K. by the "Otranto" at the end of July, met a market over-supplied with all varieties of fruit, including Oranges, and prices were disastrous, and will probably not be sufficient to cover costs.

The arrivals of Oranges on the London market during the three weeks ended 29/7/33 were unprecedented, and an increase of more than 100 per cent. over the corresponding three weeks in 1932.

Reports indicate that the market has recovered, and prospects are better for the "Orestes" and "Comorin," due in the U.K. at the end of this week.

One pleasing matter to report this month has been the partial lifting of the embargo by New Zealand on the South Australian Oranges. New Zealand has now agreed to allow Oranges from South Australia to be imported into the Dominion on a quota basis. The quota first announced, namely, 3,000 cases per ship to the south and 2,000 cases to the North Island, is much below the requirements of the Dominion.

It is hoped, however, that this is only the beginning of a better understanding between the two countries, and will lead to further modifications covering areas in Victoria and New South Wales.

**Apples.**—Arrivals from all sources were light, and in consequence values for all varieties improved during the month. Prices can be reported to-day as, N.S.W. Granny Smiths 8/- to 12/- with a few to 13/-, Delicious 8/- to 15/-, Jonathans 5/- to 10/-, Romes 5/- to 11/-, Democrats 6/- to 9/-, Tas. and Vic. Jonathans 4/- to 8/-, Cleos. 5/- to 8/6, Democrats 6/- to 9/-, Croftons 6/6 to 9/6, Scarlets 6/- to 8/6, Yates 7/- to 10/-, Crabs (Green) 5/- to 8/-.

**Bananas.**—Deliveries were light during the first half of the month, but can be expected to increase from now on. Shipments arrived from Fiji and also Norfolk Island and during the past week or ten days values eased and closed at lower figures than for some time. Enquiry was spasmodic and below normal.

**Grapefruit.**—Supplies were fair and equal to the demand and little alteration in values took place. Small fruit was hard to move, demand being mainly for the larger sizes. Prices ranged from 5/- to 10/- for special fruit.

**Lemons.**—Enquiry was dull, but with light supplies, prices showed little variation from last month. Peel buyers were operating throughout at prices around £10 per ton. Prospects are that values will improve for choice cured lines.

**Mandarins.**—Supplies were heavy with a poor demand, and prices for medium and small fruit were very low and unpayable to growers. Large sizes were wanted and sold at 4/- to 6/- per case.

During the month the Railway Refreshment Rooms arranged to assist Mandarin growers by featuring this fruit on their stalls, and fair sales are reported. Growers are in need of assistance, and it is hoped that the campaign will continue to be successful.

**Oranges.**—Prices generally were low for all Oranges, with occasional lifts in values at times of lighter deliveries to be followed by a fall as arrivals increased. A large proportion of Navels were marketed in bags and there seems no doubt that this method of marketing assists to keep down values. Prices of bags fell as low as 6/- at times during the month and never averaged 10/- at any time, even when fruit was scarce, while Navels in cases rose to 7/6 during the short periods, and special fruit of good sizes did not go below 6/- per case.

Portion of the inland fruit arrived showing dry Oranges and best buyers are now showing a preference for Coastal Navels except in the case of a few Island brands that are above suspicion.

Common Oranges were hard to move except at very low values and small sizes were at times, practically unsaleable.

**Passionfruit.**—Was in fair supply, and enquiry was normal. Values remained practically unaltered. Choice fruit was in good demand, and sold well to country order buyers.

**Pears.**—Prices remained steady for all varieties. Cool store stocks are gradually becoming exhausted, but economic conditions are expected to prevent values moving up much higher.

**Pineapples.**—Arrivals were normal, but with a weak demand values remained low throughout the month.

**Tomatoes.**—Unfortunately most of the supplies from Queensland arrived in a diseased condition, and could only be sold at low values. Choice lines were eagerly bought at good prices. Glasshouse Tomatoes were available and sold at payable figures.

P. S. MACDERMOTT.

Sydney, 25/8/33.

## New South Wales.

Sydney (28/8/33).—The market representative of the Fruitgrowers' Federation of N.S.W. reports as follows:—Apples: Cleo. 5/- to 8/6, Crofton 6/6 to 9/6, Demo. 6/- to 9/-, Del. 5/- to 14/-, few 15/-, G. Smith 5/- to 12/-, Jon. 4/- to 10/-, L. Pippin 4/- to 6/-, R. Beauty 4/- to 10/-, few 11/-, Sturmer Pippin 5/- to 7/6, Scarlets 6/- to 8/6, Yates 7/- to 10/-. Pears: B. Bosc 4/- to 8/-, Howell 4/- to 6/6, Packhams 6/- to 11/-, W. Cole 7/- to 11/-, Jos. 5/- to 11/-, W. Nelis 6/- to 10/-, G. Moreceau 6/- to 10/-; 17,000 cases of Apples and Pears are expected from Tas. to-day. Crofton, Crab, Sturmer and Scarlet are now the principal arrivals. Pears: The demand slacked considerably during the week, special lines are scarce, most fruit arriving with some wastage. In consequence most sales are 1/- to 2/- below the prices quoted. Bananas: Qld. and N.S.W. 9/- to 20/-, Norfolk Island 6/- to 12/-. The demand for this fruit has eased, small sizes particularly being slow of sale. "Squirter" is prevalent in many instances. Lemons: 8/- to 8/- bush. Oranges: Common 2/- to 3/-, Joppa 3/- to 4/-, Paterson River 3/- to 5/-, Seviles 2/- to 4/-, Vals. to 4/-. Grapefruit, N.S.W. 4/- to 6/- bush. Special and Marsh's Seedless 7/- to 10/-; Mandarins 2/- to 6/- bush. Navels, N.S.W. 3/- to 6/- bush. Papaws 7/- to 9/-, colored to 11/-; Pineapples (Qld.) 6/- to 8/-; Passionfruit, N.S.W. 3/- to 5/-, few 7/- to 8/-, N.S.W. inferior 2/- to 3/- half.



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**EARLY TOMATOES.****Most Profitable Fertiliser Practice.**

Manurial trials with early staked Tomatoes carried out by the N.S.W. Department of Agriculture last season on the properties of Messrs. A. Sorby, Macquarie Fields, and H. Eastwood, Tascott, confirmed the results of previous years regarding the most profitable fertilisers to use. These trials also gave further support to the contention that Tomatoes cannot be grown profitably without fertilisers.

The best fertiliser practice comprises an application of M22 mixture (equal parts of superphosphate and bone-dust) at transplanting time and a top-dressing with P11 mixture (six parts superphosphate and one part sulphate

of ammonia) when the first bunches of fruit form. To make the first-mentioned application, drills 5 to 6 inches deep are opened up where the seedlings are to be transplanted and the fertiliser is dusted along these drills and worked into the soil by means of a scarifier a few days prior to setting out the seedlings.

Mr. H. Dakin (Australian agent for Geo. Monro Ltd.), advises that the following cable message on August 7 was received by him:

"English Apples market continues depressed, prices unchanged: Continental shipments 'Napier Star,' 'Port Auckland,' Del. 14/-, F. Crowns 10/-, 16/-, Sturmers, Cleos. 10/-, 13/6, Jons. 14/-, 17/-, Dunns, Scarlets 10/- 10/6; Cordillera, Stassfurt, Navasota, fair condition, selling slowly; 'Doric Star,' poor condition, some waste."

**N.S.W. CITRUS PACKERS' ASSOCIATION.****New Organisation Created.**

**I**N RESPONSE to a feeling that has existed for some time in favor of forming an Association comprising members of the citrus industry a representative meeting of citrus packing establishments was held in Sydney on August 10. Those present were: E. P. M. Sheedy, B. R. Smith (Yenda Producers' Co-op. Soc. Ltd.); J. W. Blick (Producers' Co-op. Dist. Soc. Packing House, Leeton); J. S. Vagg (Griffith Producers' Co-op. Co. Ltd.); H. G. Such (late manager Central Citrus Association); T. Murray (Wyong Co-op. Citrus Packing House, Griffith); T. C. Morrison (Gosford Co-op. Citrus Packing House); A. F. Townsend (Niagra Park Growers' Ltd.); J. E. Ward, H. S. Paton, R. W. M. Shappard, E. E. Herrod. Mr. E. P. M. Sheedy was elected to act as Chairman.

Mr. E. E. Herrod was elected to act as Secretary pro tem. The Chairman referred to the desirability of establishing the association thoroughly representative of the citrus industry so that a more intelligent interest should be taken to place the marketing on a satisfactory basis, not only in respect to domestic markets, but also overseas markets. He suggested that the meeting should confine itself to the broad principles on which the association should be founded and the appointment of an executive committee to consider the details and report at a later date to a further meeting. Mr. Ward spoke in regard to the constitution and urged that membership be confined to such citrus packing houses as would comply with the Association's approved standard of pack.

Other speakers stressed the necessity of maintaining an association capable of handling Oranges in a manner desired by the markets and also to the export trade.

It was resolved. "That all citrus packing houses complying with the Association's approved standard of pack shall be eligible for membership," also "That the name shall be 'Citrus Packer's (N.S.W.) Association'." It was also resolved that the entrance fee of £2/2/- be fixed, and that the question of the annual subscription be left for decision by the first general meeting to be held in February, 1934.

An executive committee of five: Messrs. Sheedy, Ward, Morrison, Blick and Sheppard, were appointed to draft rules and carry on the work necessary until the first general meeting in February next.

**PRUNING CITRUS TREES.**

Mr. R. J. Benton, citrus fruit instructor, N.S.W. Department of Agriculture, recommends the pruning of many of the younger citrus trees on the Murrumbidgee Irrigation Area. Growers should remove lower limbs to give a clearance of at least 12ins. from the ground. Pruning should be completed early in September.

The jam gift scheme inaugurated by the Millions Club, Sydney, has attracted widespread attention. Among many interested are the members of the Australian Scottish delegation, who visited England and Scotland a few years ago, and who have decided to send gifts of jam to those who entertained them abroad.

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G.P.O., Melbourne.

# Did you see this clipping?

The Sun. 8. 6. 33.

**SAN JOSE SCALE**  
**TROUBLESOME**
**Export Pears Rejected**

SAN JOSE scale has been troublesome again this season. Many pears have had to be rejected for export at ship's side, and a still greater number is being condemned in packing sheds.

Mr. K. M. Ward, assistant entomologist of the Department of Agriculture, said yesterday that sprays for San Jose scale should be applied shortly and during July and August.

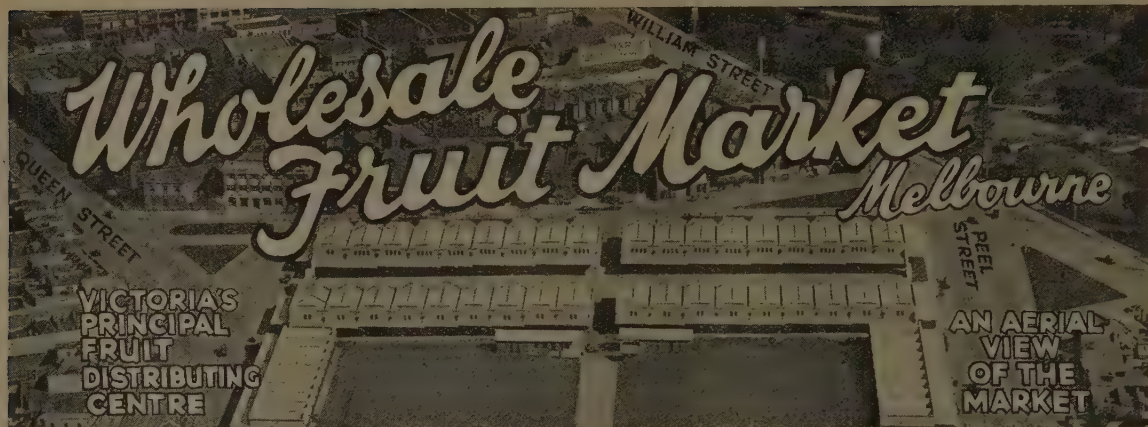
Successful growers have found that the best way to effect a thorough clean-up of San José Scale is to spray with Shell Redspray or Shellicide D.

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**MELBOURNE FRUIT MARKET NOTES.**

Melbourne (31/8/33).

Trade in the fruit market during August has been very quiet. Prices for Apples have fallen, and they are selling at 1/- to 2/- per case lower than two months ago.

Trade in Citrus compares favorably with other years, while the quality of the Oranges coming on to the market is good, the fruit is larger than usual. It is reported that there are good crops of Valencia Oranges which will be coming on to the market very shortly.

Owing to an easing off in the supply of Lemons there has been a keener demand during the last few weeks, and prices have improved.

The sale has been very slow for small Mandarins, but a better demand was experienced during the latter part of the month for larger Mandarins averaging from 180 to 240 to the case.

As it is between seasons, Bananas are scarce, and fruit which is offered is realising satisfactory prices.

Queensland Tomatoes commenced arriving on the Melbourne market early in August. Towards the end of the month glasshouse Tomatoes from South Australia have been arriving and met with a fair demand. West Australian Tomatoes are also commencing to arrive.

**MELBOURNE AND METROPOLITAN RETAIL FRUITERERS' ASSOCIATION.**

At the monthly meeting of the executive of the Melbourne and Metropolitan Retail Fruiters' Association, held on August 3, correspondence was received from the Secretary of the Southern Fruitgrowers' Association, informing them of the decision arrived at at the annual meeting of fruitgrowers held at Box Hill on July 6, in reference to the selling of large fruit by number instead of by weight. Many delegates expressed disappointment at the decision arrived at, and were of the opinion fruitgrowers should show their sincerity towards the proposal by requesting the Agricultural Department to gazette the regulations which had already been drafted, and thus make the alteration compulsory from the grower and to the consumer also; however, to assist the Apple-growers to dispose of their Apples, and on the strong recommendation of both the President and Secretary who had attended the meeting convened by the Apple Publicity Campaign Committee, it was decided that a circular be forwarded to all members, advising them to sell all large fruits by number from August 7, and also to recommend all retailers to fall in with the scheme; 2,000 circulars have been printed and circulated, and it is ex-

pected with gradual improvement by dilatory growers in their grading and packing much more fruit will be disposed of.

**MODERN ORCHARD AND VINEYARD IMPLEMENTS.**

**D. Harvey's Exhibit at the Melbourne Royal Show.**

An interesting exhibit of both horse-drawn and tractor power lift implements will be staged at Stand No. 58, Plummer-avenue, Showgrounds. Orchardists, vigneron and farmers will be interested in the comprehensive display of Mr. D. Harvey, who has during the past 30 years acquired wide reputation for the high standard of his productions.

Visitors are sure to be interested in the combination reversible hill-side disc plough which has won approval wherever used. With attachments which are easily fitted, the implement can be converted from a disc plough into a single or double furrow mouldboard plough, spring tyne cultivator, rigid type cultivator, two-way disc cultivator, disc back-filler or high moulder, delver, sub-soiler, or hard pan "buster," three-tyne semi-sub-soiler and irrigation furrower. The Harvey method of orchard cultivation embodied in the one-way disc cultivator and other special lines is still in the forefront after years of competition, being appreciated in Australia and abroad.

Implements and machines are made for use with horses as well as with tractors; sub-soilers are in view for breaking up hard pan in irrigation, mole drainers for forming underground drains in areas of excessive moisture, also dehydrators for fruits and vegetables. Included also are disc and mouldboard ploughs, rigid and spring-tyne cultivators, two-way discs and tandem disc cultivators. The lines are of Australian manufacture throughout.

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## Victoria.

**Melbourne (31/8/33).**—Prices quoted yesterday by the Wholesale Fruit Merchants' Association were:—Apples, per case: Eating, to 6/-; cooking, 3/- to 4/-; special higher. Bananas: Qld., per double case, green, 8's and 9's, 20/- to 21/-; 7's, 18/- to 19/-; 6's, 16/- to 17/-; rust-affected fruit lower. Custard Apples, 4/- to 5/-; special higher, half case. Lemons, per case, 4/- to 7/-. Mandarins: N.S.W., 3/- to 5/-; Vic. and S. Aus., to 7/-; small and inferior almost unsaleable, Navel Oranges, N.S.W., 4/- to 6/-; Vic., 4/- to 9/-, inferior lower; S. Aus., 6/- to 9/-; a few specials higher. Oranges: Common, 3/- to 5/-; Poorman's and Seville Oranges, to 6d. Grape fruit, 5/- to 9/-. Passionfruit, good quality, to 10/-; few special, to 11/-; inferior lower per case. Pineapples, double case, 7/- to 9/-. Papaws, 9/- to 12/- double case; special higher; green unsaleable.

The Melbourne market manager of the Federal Citrus Council of Australia reports that sales yesterday were as follows:—Navel Oranges, average standard Vic. and N.S.W., 60-75, 4/-; 84-96, 4/6; 112-126, 5/-; 140-168, 5/6; a few 6/-; off type, faulty and plain grades lower; selected unwrapped standards, to 8/-; selected wrapped standards, 9/- and 9/6; a few specially selected higher. Common Oranges, average standards, to 4/6; a few selected standards to 5/-; Mandarins, mature, Vic. and S.A. varieties, 160-248, to 7/-; a few 8/-; 250-300, to 6/-; smaller, from 3/-; others lower; Sydney Emperor, 160-248, 5/-; a few to 6/-; 250-300, from 3/-; smaller almost unsaleable. Grapefruit: Average standards, 6/-, best counts; selected unwrapped standards, 54-75, to 7/- and 8/-; a few specially selected wrapped higher. Seville Oranges, standards to count 85, nominally 5/- to 6/-; small rough sorts unsaleable. Poorman's Oranges nominally 5/- to 6/-. Lemon: Average standards dull, 5/-; a few 6/-; a few specially selected standards, to 7/- and 8/-.

## THE SUNSHINE HARVESTER WORKS.

The name of this expansive factory, and its founder, the late Hugh Victor McKay, immediately conjure up visions of giant harvesting, seeding, and tillage machines for the great wheat areas of the north and west.

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Fruitgrowers visiting the Melbourne Royal Show are urged to visit the Sunshine Stand at No. 82 Skene-street, Showgrounds, and see for themselves the comprehensive range of implements, machines and engines, designed and built for economical and efficient work under Australian conditions.

## VICTORIA.

**Stanley.**—About 12,000 cases of Apples were sent for export this season, all through a packing shed run by Messrs. Barker, Green & Parke Pty. Ltd., in conjunction with Messrs. J. B. Mills & Co. The greater portion of fruit which is produced here is sent to New South Wales, being a late cool district and having a high altitude, between 2,000 and 2,500 feet above sea level, and all grown without irrigation. The fruit is of good color and keeps well without cool storage. Quite a number of growers hold fruit till well into September and then market it in good condition.—(W. H. Collins, 17/8/33.)

## South Australia.

**Adelaide (25/8/33).**—Apples (eating), 4/- to 6/- case; do. (cooking), 4/- to 5/- case; Bananas (Qld.), 23/- to 28/- case; Lemons, 3/- to 4/- case; Oranges (Common), 3/- to 4/-; do. (Blood), 4/-; do. (Mandarin), 6/- to 7/-; do. (Navel), 5/- to 7/-; do. (Poorman), 3/- case; Passionfruit, 16/- case; Pears (eating), 5/- to 7/- case; Pineapples, 12/- to 14/- case.

## New Zealand.

**Dunedin (19/8/33).**—Messrs. Reilly's Central Produce Mart Ltd., report as follows:—The feature of the week's business has been the conflicting statements in regard to the Australian embargo, but we are pleased to state that the Acting Prime Minister has advised us that the "Waikouaiti" will bring three thousand cases of Oranges to the South Island, arriving here and will be ready for delivery on Monday, 28th. A further three thousand cases will come forward by the "Wainui," which will reach us on or about September 12. The incoming shipment by the "Maunganui" totals roughly 5,000 cases Island Oranges, 2,600 cases of Bananas, and 1,800 cases of Tomatoes. Sales during the week have been normal. Pears have been scarce, sales of Apples have been rather slow. Prices: Half cases: Pears, Nelis 5/-, 6/6, W. Coles 6/-, 6/9; bushel cases: Apples, Otago Central, Jons. 5/-, 7/-, Del. 6/-, 11/6, Sturmers 5/-, 10/-, cookers, choice 5/-, 6/6, others 2/-, 3/-. Pears, cookers 7/-, 8/-; Poorman Oranges, 5/-, 6/-; Lemons, N.Z. 14/-, 18/-; Cal. 60/-, 70/-. American cases: Oranges, Val. 35/-; Bananas, ripe Nines 18/-; Grapefruit 45/-.

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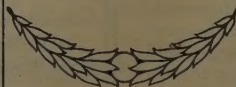
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## Queensland.

**Brisbane (28/8/33).**—Bananas: Neurum, PAE, 16/6, 14/9, 12/6; KY, 14/6, 11/6, 9/9; Winya, LOC 14/-, 12/-, 9/-; EPC, 13/6, 11/-, 8/-. Local fruit: Pineapples, smooth-leaf, cases 2/4 to 4/6, special 5/-; rough leaf 2/- to 4/- case; Oranges 3/- to 6/- case, special 7/-; Navels, choice, 9/- to 11/-, others 7/- to 8/-; Mandarins: Scarlet 4/- to 9/- case, a few large 10/- to 11/-; Ellendale 7/- to 10/-; King of Siam 6/- to 8/-, Emperors 4/- to 9/-; special to 11/-; Glens, 6/- to 11/-; special 12/- to 16/-; Lemons 4/6 to 8/- case; Benyenda 10/- to 12/-; Grapefruit, 5/- to 7/- case; Custard Apples, 2/- to 3/- case; Papaws 1/- to 3/-, special 4/-; Passionfruit, No. 1 quality, 5/- to 7/- case; No. 2, 3/- to 4/-. Rates for imported fruit were as follows:—Apples, S.T.P., 6/- to 7/-; Demo. 8/- to 9/-; Jon. 7/6 to 10/-; R.B. 7/- to 8/-; Pears: G.M. 10/- to 13/-; W.N. 10/- to 14/-; W.C. 12/- to 16/-; P.T., 10/- to 13/-; B.P., 4/- to 8/-; Oranges, 4/- to 6/-; Mandarins 2/- to 5/-; Lemons, 5/- to 8/-; Passionfruit, 5/- to 8/-.

## West Australia.

**Perth (23/8/33).**—Apples: Dunn's, dumps, 8/- to 12/6; R. Beauty, 7/- to 11/6; Yates, 8/- to 14/-; G.S., 10/- to 15/- (special to 16/-, others from 8/-); Cleo. 8/- to 11/- (special to 12/-); Doherty 8/- to 11/- (special to 12/-, others from 6/-), Rokewood 7/- to 11/- (special to 12/-, others from 5/6); Citrus: Oranges, plain, flats, 2/- to 3/6; dumps, 4/6 to 7/-; Navels 3/6 to 5/- (inferior from 2/-); dumps, 4/6 to 8/- (special to 9/-); Lemons 2/- to 4/6 (special to 5/3); Mandarins 5/- to 9/- (special to 9/-, others from 3/-); Tomatoes, flats, 10/- to 15/- (special to 18/-), half dumps 6/- to 10/- (special to 13/-).

Mr. J. S. Vagg, of the Griffith Producers' Co-operative Co. was entertained in Sydney on the eve of his departure for England to investigate the marketing of Australia's citrus fruits. Happy speeches were made by a representative gathering of well wishers, and Mr. Vagg suitably responded.

**Liverpool.**—Writing under date June 28, Messrs. J. C. Houghton & Co. state that during the past week they had been flooded with supplies from Australia ex "Doric Star," "Delphic," "Ulysses" and "Napier Star." The market could not stand the strain without lowering values. Other ports were also liberally catered for. Unfortunately many Tasmanian Sturmers and Scarlets arrived unsound. Victorian fruit was excellent and worthy of higher prices. Tasmanian Pears ex "Napier Star" landed in good order. Prices, Comice, tray, 7/6 to 8/3, W.N. half case 7/- to 7/6, Keiffer, half case 3/6 to 4/3, G.M. half case 3/3 to 4/-.

LONDON, Aug. 21.

Apples are very slow of sale, large proportion of offerings withdrawn from sale. Ex "Port Sydney": Tas. Sturmers 3/- to 4/6 a case. Vic. Rokewoods 5/- to 7/-; and Yates 4/3 to 6/-. N.Z. Apples ex store: Dougherty 7/6 to 8/- a case, Romes 7/3 to 8/-, Statesman 5/- to 8/-, and Sturmers 4/-.

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## QUEENSLAND.

## Pineapples Superseding Bananas at Gympie.

Gympie (16/8/33).—The Banana industry around Gympie has declined, but Pineapples are coming into their own, and, before long, we will be the largest growing district. Fresh Beans are being grown heavily, too, the old Banana lands being ideal for the purpose. The Banana experimental plot at Tin Can Bay is doing very well, so much so, that another large area of scrub is now being felled for planting at Christmas.

Suckers that had been planted last December had bunched at the end of six months, and the group of growers expected there would be a fair amount of Bananas available before Christmas. The experiment had provided for all conditions of soil and altitude, and was proving which was the best class of scrub land. The members were delighted with the consideration given them by the Forestry Department officers, who were taking a keen interest in the work of the group. The surveying of the 500 acres which will be allotted to the group is now being undertaken, and regard is being paid to the results given by the experiment. The surveying will take about three months, which would be too late for planting this year, but the group was arranging with the Department to add another couple of acres to the 20-acre patch to be used as a nursery for suckers, which would be ready when the bigger area was surveyed and divided.

## QUEENSLAND.

The following growers were recently elected as members of the Deciduous Section Group Committee:—Chairman, Mr. D. Pfrunder; Secretary, Mr. A. D. Philp; Messrs. R. G. Newland, W. Clegg, C. L. Ferguson, A. D. Philp, D. Pfrunder, D. G. T. Gow, J. B. Ferris, S. Barber, T. J. Thompson. Mr. Pfrunder was elected as representative to the C.O.D. A census is being taken by the C.O.D. of

fruit trees and vines in the Stanthorpe district also the production of fruit and Grapes in that district.

A public meeting of all growers is to be held in October when export and storage problems of the forthcoming season's fruit will be considered. Mr. W. Ranger will attend the meeting.

Gympie.—The annual meeting of the Gympie Fruit-growers' Association, in July, when Mr. C. C. Cullen presided. Those present were Messrs. A. Cheales, I. Marks, J. P. Carey, N. Jensen, C. H. Euston, A. G. Stewart, C. J. Foster, H. Springer, J. Britnell, L. Haylock, L. R. Cox, D. McLaurin (Dist. Inspector), the Secretary (Mr. M. Buchanan), and about six other growers. The Chairman submitted the annual report. The Directors' proposal to pay from property profits, the amounts hitherto contributed by growers in excess of £10, totalling about £900 was agreed to. It was also decided to strike a levy of 1d. per case of fruit and vegetables consigned through the Association, to finance future activities. Messrs. N. Jensen and C. C. Cullen were re-elected directors, and at a subsequent meeting, Mr. Cullen was re-elected Chairman.

The Banana industry around Gympie, Queensland, has seriously declined, but considerable expansion has taken place in Pineapple production.

French Beans are also being largely grown.

The well-known firm of J. C. Houghton & Co., of Liverpool and London, announce that on July 1 the firm was converted into two private limited companies under the style and title of J. C. Houghton & Co. (Liverpool) Ltd., 1 Temple Court, Liverpool, and J. C. Houghton & Co. (London) Ltd., London Fruit Exchange, Spitalfields, London. E.I. There will be no change whatever in the control or conduct of the business. The present partners will act as directors with the addition of a new director, Mr. Arthur Peacock, on the London directorate.

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